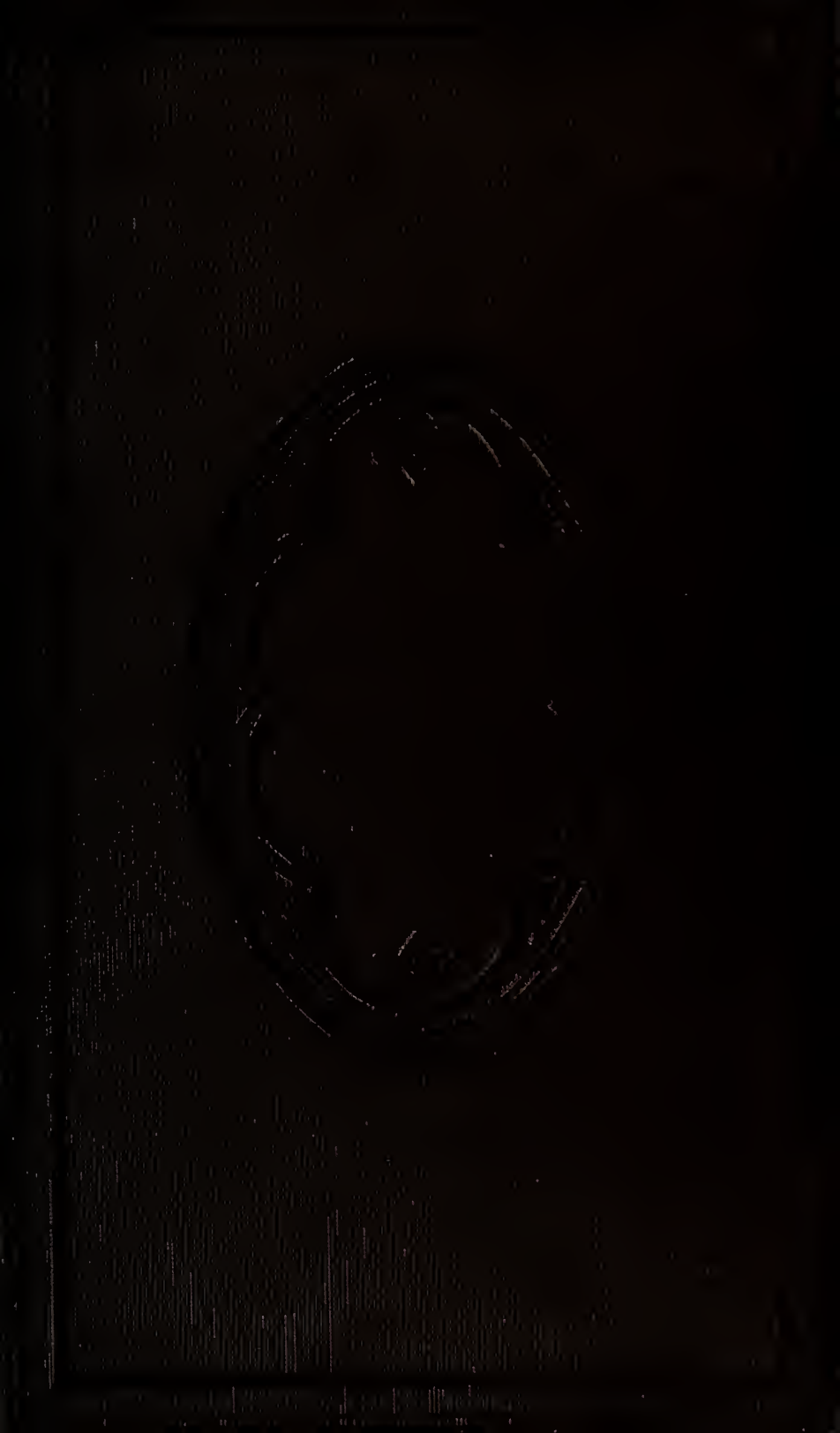

MONTHLY BULLETIN

OF THE

STATE BOARD OF HEALTH

OF

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PUBLIC DOCUMENT

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879.6
1911

WEEKLY RETURNS OF DEATHS FROM CITIES AND TOWNS OF MORE THAN 10,000 POPULATION.

A

WEEK ENDING JAN. 7, 1911.

CITIES AND TOWNS.	Population. Census for 1910.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM—					
				Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	670,585	227	50	78	33	26	4	–	–
Worcester,	145,986	42	9	16	11	1	1	–	–
Fall River,	119,295	49	17	29	16	4	1	–	–
Lowell,	106,294	43	14	17	14	–	–	–	–
Cambridge,	104,839	26	4	18	7	7	–	–	1
New Bedford,	96,652	33	12	14	9	4	–	–	–
Lynn,	89,336	28	7	9	6	2	–	–	–
Springfield,	88,926	29	3	6	2	3	–	–	–
Lawrence,	85,892	30	12	14	8	2	2	–	–
Somerville,	77,236	25	3	8	6	–	–	–	–
Holyoke,	57,730	18	6	5	4	1	–	–	–
Brockton,	56,878	7	0	3	–	1	–	–	1
Malden,	44,404	9	–	–	–	–	–	–	–
Haverhill,	44,115	8	3	2	2	–	–	–	–
Salem,	43,697	14	–	6	4	2	–	–	–
Newton,	39,806	12	3	1	–	–	1	–	–
Fitchburg,	37,826	9	1	2	2	–	–	–	–
Taunton,	34,259	22	4	10	4	3	1	–	–
Everett,	33,484	4	–	1	–	–	–	–	–
Quincy,	32,642	8	2	3	1	2	–	–	–
Chelsea,	32,452	11	2	6	5	–	–	–	–
Pittsfield,	32,121	19	8	9	8	–	–	–	1
Waltham,	27,834	12	3	4	2	–	–	1	–
Brookline,	27,792	4	–	–	–	–	–	–	–
Chicopee,	25,401	12	4	8	6	2	–	–	–
Gloucester,	24,398	3	–	1	–	1	–	–	–
Medford,	23,150	3	–	2	2	–	–	–	–
North Adams,	22,019	8	4	5	5	–	–	–	–
Northampton,	19,431	9	1	1	1	–	–	–	–
Beverly,	18,650	0	–	–	–	–	–	–	–
Revere,	18,219	4	–	1	1	–	–	–	–
Leominster,	17,580	3	–	1	–	–	–	–	–
Attleborough,	16,215	2	2	–	–	–	–	–	–
Westfield,	16,044	2	1	2	2	–	–	–	–
Peabody,	15,721	3	–	1	–	–	–	–	–
Melrose,	15,715	3	1	–	–	–	–	–	–
Hyde Park,	15,507	3	0	2	2	–	–	–	–
Woburn,	15,308	4	2	–	–	–	–	–	–
Newburyport,	14,949	9	–	–	–	–	–	–	–
Gardner,	14,699	4	1	–	–	–	–	–	–
Marlborough,	14,579	5	0	–	–	–	–	–	–
Clinton,	13,075	5	–	3	–	–	1	–	–
Milford,	13,055	0	–	–	–	–	–	–	–
Adams,	13,026	4	2	3	2	1	–	–	–
Framingham,	12,948	3	0	2	2	–	–	–	–
Weymouth,	12,895	–	–	–	–	–	–	–	–
Watertown,	12,875	2	0	–	–	–	–	–	–
Southbridge,	12,592	0	–	–	–	–	–	–	–
Plymouth,	12,141	–	–	–	–	–	–	–	–
Webster,	11,509	2	2	–	–	–	–	–	–
Methuen,	11,448	1	–	1	–	1	–	–	–
Wakefield,	11,404	1	–	–	–	–	–	–	–
Arlington,	11,187	6	3	3	2	–	–	–	–
Greenfield,	10,427	3	–	2	1	1	–	–	–
Winthrop,	10,132	2	–	–	–	–	–	–	–
Recapitulation									
Total of reporting towns,	2,581,344	795	186	299	170	64	11	1	3

WEEK ENDING JAN. 14, 1911

CITIES AND TOWNS.	Population. Census for 1910.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM—					
				Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	670,585	222	34	68	34	24	2	1	1
Worcester,	145,986	52	12	17	12	2	–	1	–
Fall River,	119,295	36	16	21	7	3	4	1	1
Lowell,	106,294	32	7	9	6	–	–	–	–
Cambridge,	104,839	26	6	8	4	3	–	–	–
New Bedford,	96,652	34	14	11	7	4	–	–	–
Lynn,	89,336	27	3	7	4	1	1	–	–
Springfield,	88,926	31	4	12	7	1	1	1	–
Lawrence,	85,892	29	13	14	4	2	2	–	–
Somerville,	77,236	26	4	9	8	–	–	–	–
Holyoke,	57,730	24	6	8	6	1	–	–	–
Brockton,	56,878	18	5	5	2	2	1	–	–
Malden,	44,404	8	–	4	3	–	–	–	–
Haverhill,	44,115	15	4	6	4	–	–	–	–
Salem,	43,697	12	6	3	3	–	–	–	–
Newton,	39,806	6	–	2	1	1	–	–	–
Fitchburg,	37,826	7	3	1	1	–	–	–	–
Taunton,	34,259	11	1	4	2	1	–	1	–
Everett,	33,484	8	2	4	1	1	–	–	–
Quincy,	32,642	7	2	4	2	–	–	1	–
Chelsea,	32,452	21	4	8	5	1	1	–	–
Pittsfield,	32,121	8	2	1	1	–	–	–	–
Waltham,	27,834	7	0	1	–	1	–	–	–
Brookline,	27,792	8	–	4	2	2	–	–	–
Chicopee,	25,401	7	2	1	–	1	–	–	–
Gloucester,	24,398	–	–	–	–	–	–	–	–
Medford,	23,150	4	–	–	–	–	–	–	–
North Adams,	22,019	4	1	2	1	–	–	–	–
Northampton,	19,431	11	1	4	2	1	–	–	–
Beverly,	18,630	2	–	1	1	–	–	–	–
Revere,	18,219	4	–	2	2	–	–	–	–
Leominster,	17,580	3	–	2	1	–	–	–	–
Attleborough,	16,215	6	2	3	–	2	–	–	1
Westfield,	16,044	8	5	3	–	2	1	–	–
Peabody,	15,721	6	–	1	1	–	–	–	–
Melrose,	15,715	3	0	–	–	–	–	–	–
Hyde Park,	15,507	6	2	1	1	–	–	–	–
Woburn,	15,308	6	1	4	2	–	1	–	–
Newburyport,	14,949	5	–	1	1	–	–	–	–
Gardner,	14,699	10	3	3	2	–	–	–	–
Marlborough,	14,579	2	0	–	–	–	–	–	–
Clinton,	13,075	3	–	–	–	–	–	–	–
Milford,	13,055	4	0	3	2	1	–	–	–
Adams,	13,026	4	2	–	–	–	–	–	–
Framingham,	12,948	2	–	1	1	–	–	–	–
Weymouth,	12,895	–	–	–	–	–	–	–	–
Watertown,	12,875	2	2	1	1	–	–	–	–
Southbridge,	12,592	4	1	2	–	1	1	–	–
Plymouth,	12,141	–	–	–	–	–	–	–	–
Webster,	11,509	3	2	1	1	–	–	–	–
Methuen,	11,448	2	–	1	–	1	–	–	–
Wakefield,	11,404	3	–	–	–	–	–	–	–
Arlington,	11,187	3	–	–	–	–	–	–	–
Greenfield,	10,427	1	–	–	–	–	–	–	–
Winthrop,	10,132	0	–	–	–	–	–	–	–

Recapitulation.

Total of reporting towns,	2,556,946	793	172	268	145	61	15	6	3

WEEK ENDING JAN. 21, 1911

CITIES AND TOWNS.	Population. Census for 1910.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM—					
				Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	670,585	243	54	87	37	25	4	–	2
Worcester,	145,986	48	11	16	12	3	–	–	–
Fall River,	119,295	32	13	13	5	2	–	–	1
Lowell,	106,294	29	4	12	7	2	–	–	–
Cambridge,	104,839	30	4	11	–	7	1	–	–
New Bedford,	96,652	35	11	9	5	3	–	–	–
Lynn,	89,336	26	6	7	3	3	–	–	–
Springfield,	88,926	25	4	7	3	2	1	–	–
Lawrence,	85,892	23	8	10	3	3	–	–	–
Somerville,	77,236	18	1	6	2	3	1	–	–
Holyoke,	57,730	20	5	9	5	1	–	–	–
Brockton,	56,878	14	3	4	2	2	–	–	–
Malden,	44,404	15	3	2	2	–	–	–	–
Haverhill,	44,115	11	–	3	2	–	–	–	–
Salem,	43,697	20	6	7	4	2	–	–	–
Newton,	39,806	6	1	2	2	–	–	–	–
Fitchburg,	37,826	10	5	5	5	–	–	–	–
Taunton,	34,259	18	7	7	4	1	1	–	–
Everett,	33,484	8	2	2	–	1	1	–	–
Quincy,	32,642	7	3	5	3	–	–	–	–
Chelsea,	32,452	10	1	3	1	–	–	–	–
Pittsfield,	32,121	15	3	5	2	2	1	–	–
Waltham,	27,834	7	1	1	–	–	–	–	1
Brookline,	27,792	6	–	2	2	–	–	–	–
Chicopee,	25,401	14	7	4	4	–	–	–	–
Gloucester,	24,398	8	1	1	–	1	–	–	–
Medford,	23,150	14	1	5	3	2	–	–	–
North Adams,	22,019	7	3	1	1	–	–	–	–
Northampton,	19,431	4	–	–	–	–	–	–	–
Beverly,	18,650	5	–	–	–	–	–	–	–
Revere,	18,219	4	–	1	–	1	–	–	–
Leominster,	17,580	4	1	–	–	–	–	–	–
Attleborough,	16,215	6	1	4	3	1	–	–	–
Westfield,	16,044	7	1	4	2	2	–	–	–
Peabody,	15,721	3	–	1	–	–	–	–	–
Melrose,	15,715	3	1	2	1	–	–	–	–
Hyde Park,	15,507	3	1	–	–	–	–	–	–
Woburn,	15,308	3	0	1	1	–	–	–	–
Newburyport,	14,949	6	1	3	1	1	1	–	–
Gardner,	14,699	3	2	1	1	–	–	–	–
Marlborough,	14,579	3	0	1	–	–	1	–	–
Clinton,	13,075	5	1	2	1	–	–	–	–
Milford,	13,055	1	0	1	–	1	–	–	–
Adams,	13,026	8	3	1	–	–	–	–	–
Framingham,	12,948	2	0	–	–	–	–	–	–
Weymouth,	12,895	–	–	–	–	–	–	–	–
Watertown,	12,875	3	1	1	–	–	–	–	–
Southbridge,	12,592	4	2	1	–	–	–	–	–
Plymouth,	12,141	–	–	–	–	–	–	–	–
Webster,	11,509	7	3	2	2	–	–	–	–
Methuen,	11,448	4	1	3	2	–	–	–	–
Wakefield,	11,404	1	–	1	–	–	–	–	–
Arlington,	11,187	3	0	1	–	1	–	–	–
Greenfield,	10,427	4	–	1	–	1	–	–	–
Winthrop,	10,132	4	–	–	–	–	–	–	–
Recapitulation.									
Total of reporting towns,	2,581,344	819	187	278	133	73	12	–	4

WEEK ENDING JAN. 28, 1911.

CITIES AND TOWNS.	Population. Census for 1910.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM—					
				Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	670,585	277	74	87	38	25	2	1	3
Worcester,	145,986	33	7	12	7	4	1	–	–
Fall River,	119,295	35	19	17	7	–	3	–	–
Lowell,	106,294	43	12	12	5	2	2	–	–
Cambridge,	104,839	34	6	14	6	5	1	–	–
New Bedford,	96,652	26	11	11	6	2	–	–	–
Lynn,	89,336	22	3	6	4	2	–	–	–
Springfield,	88,926	19	4	3	3	–	–	–	–
Lawrence,	85,892	30	18	20	10	5	–	–	–
Somerville,	77,236	23	3	5	2	1	–	1	–
Holyoke,	57,730	22	9	5	3	1	1	–	–
Brockton,	56,878	8	2	1	–	–	–	–	–
Malden,	44,404	11	1	3	3	–	–	–	–
Haverhill,	44,115	11	6	5	1	–	1	–	–
Salem,	43,697	17	5	7	3	3	–	–	–
Newton,	39,806	8	2	2	1	1	–	–	–
Fitchburg,	37,826	9	3	3	2	1	–	–	–
Taunton,	34,259	10	1	4	4	–	–	–	–
Everett,	33,484	3	1	–	–	–	–	–	–
Quincy,	32,642	8	2	3	1	2	–	–	–
Chelsea,	32,452	17	3	7	4	1	–	–	–
Pittsfield,	32,121	15	3	7	5	2	–	–	–
Waltham,	27,834	8	1	3	1	–	–	–	–
Brookline,	27,792	10	–	2	2	–	–	–	–
Chicopee,	25,401	6	4	3	2	–	–	1	–
Gloucester,	24,398	6	1	1	–	1	–	–	–
Medford,	23,150	4	–	1	–	1	–	–	–
North Adams,	22,019	8	2	3	3	–	–	–	–
Northampton,	19,431	5	1	2	1	–	–	–	–
Beverly,	18,650	6	2	2	1	1	–	–	–
Revere,	18,219	3	–	1	–	1	–	–	–
Leominster,	17,380	4	2	1	1	–	–	–	–
Attleborough,	16,215	3	1	–	–	–	–	–	–
Westfield,	16,044	5	–	2	–	2	–	–	–
Peabody,	15,721	1	–	–	–	–	–	–	–
Melrose,	15,715	10	2	1	–	1	–	–	–
Hyde Park,	15,507	4	1	1	–	1	–	–	–
Woburn,	15,308	3	–	–	–	–	–	–	–
Newburyport,	14,949	6	–	–	–	–	–	–	–
Gardner,	14,699	5	3	2	1	–	–	–	–
Marlborough,	14,579	5	1	–	–	–	–	–	–
Clinton,	13,075	2	–	1	1	–	–	–	–
Milford,	13,055	–	–	–	–	–	–	–	–
Adams,	13,026	5	1	–	–	–	–	–	–
Framingham,	12,948	8	1	4	2	2	–	–	–
Weymouth,	12,895	–	–	–	–	–	–	–	–
Watertown,	12,875	0	–	–	–	–	–	–	–
Southbridge,	12,592	5	–	1	–	1	–	–	–
Plymouth,	12,141	–	–	–	–	–	–	–	–
Webster,	11,509	1	–	–	–	–	–	–	–
Methuen,	11,448	5	1	1	1	–	–	–	–
Wakefield,	11,404	1	–	–	–	–	–	–	–
Arlington,	11,187	2	–	1	–	–	1	–	–
Greenfield,	10,427	2	–	1	1	–	–	–	–
Winthrop,	10,132	1	–	–	–	–	–	–	–
Recapitulation.									
Total of reporting towns,	2,568,289	815	219	268	132	68	12	3	3

WEEKLY RETURNS OF DEATHS FROM CERTAIN INFECTIOUS DISEASES.

DEATHS FROM INFECTIOUS DISEASES NOT SPECIFICALLY MENTIONED IN ABOVE TABLES DURING THE WEEKS OF JANUARY 7, 14, 21 AND 28, 1911.

DISEASE.	Place.	WEEK ENDING —			
		Jan. 7.	Jan 14	Jan. 21.	Jan. 28
Cerebro-spinal meningitis,	Boston,	–	–	1	–
	Gardner,	–	1	–	1
	Everett,	–	1	–	–
	Northampton,	–	1	–	–
	Southbridge,	–	–	1	–
	Watertown,	–	–	1	–
	Worcester,	–	–	1	–
Scarlet fever,	Arlington,	1	–	–	–
	Boston,	1	–	4	1
	Brockton,	1	–	–	–
	Chelsea,	–	1	–	–
	Haverhill,	–	1	–	2
	Leominster,	1	–	–	–
	Malden,	–	1	–	–
	Melrose,	–	–	1	–
	Quincy,	–	1	2	–
	Somerville,	–	–	–	1
	Woburn,	–	1	–	–
	Worcester,	1	–	–	–
Whooping cough,	Boston,	–	1	2	4
	Brockton,	–	–	–	1
	Chelsea,	–	–	1	–
	Fall River,	–	1	1	1
	Lawrence,	–	–	1	1
	Lowell,	1	–	–	–
	Lynn,	1	–	1	–
	Salem,	–	–	1	1
	Taunton,	–	–	1	–
Erysipelas,	Boston,	1	–	2	1
	Chelsea,	1	–	–	–
	Clinton,	–	–	1	–
	Lowell,	1	–	–	–
	Lynn,	–	1	–	–
	New Bedford,	1	–	–	–
	Springfield,	1	–	–	–
Tuberculosis other than pulmonary.	Boston,	4	1	3	7
	Cambridge,	1	–	1	1
	Chelsea,	–	–	1	2
	Everett,	1	1	–	–
	Fall River,	1	1	1	–
	Haverhill,	–	1	1	–

DEATHS FROM INFECTIOUS DISEASES, ETC. — *Concluded.*

DISEASE.	Place.	WEEK ENDING — Jan. 7.	Jan. 14.	Jan. 21.	Jan. 28.
Tuberculosis other than pulmonary. — *Con.*	Leominster,	–	1	–	–
	Lowell,	1	3	3	1
	Methuen,	–	–	1	–
	New Bedford,	–	–	–	2
	North Adams,	–	1	–	–
	Peabody,	1	–	–	–
	Somerville,	–	1	–	–
	Waltham,	–	–	–	1
	Worcester,	2	2	–	–
Meningitis other than cerebro-spinal.	Wakefield,	–	–	1	–
Influenza,	Boston,	1	1	1	1
	Clinton,	1	–	–	–
	Holyoke,	–	–	1	–
	Lawrence,	–	1	1	–
	Peabody,	–	–	1	–
	Springfield,	–	1	–	–
	Taunton,	2	–	–	–
	Waltham,	1	–	–	1

WEEKLY RETURNS OF CASES OF INFECTIOUS DISEASES.

CASES OF INFECTIOUS DISEASES REPORTED DURING THE WEEKS OF JANUARY 7, 14, 21 AND 28, 1911.

[Under the provisions of section 52 of chapter 75 of the Revised Laws.]

	WEEK ENDING — Jan. 7.	Jan. 14.	Jan. 21.	Jan. 28.	Total.
Diphtheria,	153	189	224	426	992
Measles,	237	212	226	282	957
Scarlet fever,	150	163	161	157	631
Typhoid fever,	29	17	20	24	90
Tuberculosis, pulmonary,	142	105	123	152	522
Tuberculosis other than pulmonary,	2	2	2	2	8
Cerebro-spinal meningitis,	2	2	1	1	6
Meningitis other than cerebro-spinal.	2	1	1	1	5
Whooping cough,	89	95	83	116	383
Varicella,	66	103	89	75	333
Ophthalmia neonatorum,	12	12	14	13	51
Anterior poliomyelitis,	4	5	–	4	13
Mumps,[1]	8	16	7	17	48
Erysipelas,[1]	–	2	–	1	3
Leprosy,	–	–	1	–	1
Anthrax,	1	–	–	–	1
Malaria,	–	–	1	–	1

[1] Erysipelas and mumps are not diseases notifiable under section 52 of chapter 75 of the Revised Laws. The figures concerning these diseases are, therefore, incomplete.

MONTHLY REPORT ON INSPECTION OF FOOD AND DRUGS.

The following summary presents the results of the examination of food and drugs made by the State Board of Health during the month of January, 1911:—

Articles examined.	Number found to be of Good Quality.	Number adulterated or varying from the Legal Standard.	Total.	Articles examined.	Number found to be of Good Quality.	Number adulterated or varying from the Legal Standard.	Total.
Buckwheat flour,	1	–	1	Honey,	2	–	2
Butter,	3	–	3	Jams and jellies,	5	–	5
Canned fish,	1	–	1	Lard,	4	3	7
Cheese,	1	–	1	Malt liquors,	4	–	4
Cider,	3	5	8	Meat products: —			
Cocoa,	3	–	3	Canned meat,	1	–	1
Coffee extract,	1	1	2	Hamburg steak,	1	2	3
Confectionery,	2	–	2	Pressed meat,	2	–	2
Corn starch,	1	–	1	Sausages,	11	28	39
Cream,	6	–	6	Tripe,	3	2	5
Drugs,	79	52	131	Milk,	228	59	287
Flavoring extracts: —				Pastry,	1	–	1
Lemon,	2	–	2	Pickles,	2	–	2
Nutmeg,	1	–	1	Salad dressing,	2	–	2
Peppermint,	3	–	3	Spices,	6	–	6
Vanilla,	5	–	5	Table sauce,	7	1	8
Wintergreen,	1	–	1	Vinegar,	8	9	17
Fruit juices: —				Yeast,	5	1	6
Lemon,	1	–	1	Total,	407	163	570
Raspberry,	1	–	1				

The cities and towns in which samples were collected were: Ayer, Boston, Brockton, Cambridge, Chelsea, Clinton, Lawrence, Lowell, Lynn, Malden, Milford, Millis, New Bedford, Newton, North Adams, Plymouth, Quincy, Salem, Shirley, South Framingham, Springfield, Swansea, Webster, West Springfield, Westfield, Westford, Winthrop and Worcester.

PROSECUTIONS FOR VIOLATIONS OF THE LAW RELATING TO FOOD AND DRUGS.

Twelve convictions were secured during the month of January, 1911, for selling adulterated food as follows:—

No.	Name of Defendant.	Place.	Character of Article sold.
1	The Goodwin Company,	Cambridge,	Coffee extract.
2	George E. Martin,	Westford,	Lard.
3	Amos P. Best,	Lowell,	Milk (total solids, 11.72).[1]
4	Daniel Derby,	Dracut,	Milk.[2]
5	Wallace Drew,	Lowell,	Milk (total solids, 12.36).[2]
6	Darwin F. Heffion,	Lynn,	Milk (total solids, 10.88).[1]
7	R. C. Nickles,	Lowell,	Milk (total solids, 10.67).[1]
8	R. C. Nickles,	Lowell,	Milk (total solids, 11.67).[2]
9	Gustav Schmidgall,	Lynn,	Milk (total solids, 11.70).[2]
10	William E. Shockley,	Kingston,	Milk (total solids, 9.48).[1]
11	Herbert C. Lord,	Malden,	Pickles (contained alum).
12	Frank Ryder,	Boston,	Sausages (contained cereal).

[1] Watered. [2] Skimmed.

Fines imposed, $320.

LIST OF ADULTERATED OR IMPROPERLY LABELED FOODS, ETC., FOR JANUARY, 1911.

Number of Sample.	Character of Sample.	Name of Manufacturer, Wholesaler or Producer.	Results of Analyses.
13766	Catsup,	"Merrimack Valley" Brand, Fiedler Bros. Company, Lawrence, Mass.	Contained benzoic acid, improperly labelled.
13631	Coffee extract,	The Goodwin Company, Cambridge, Mass.,	Contained benzoic acid.
13773	Camphor liniment,	J. H. Folkins & Co., Chelsea, Mass.,	Low in camphor; 65 per cent. U. S. P. strength.
q 6189	Spirit of camphor,	Henry E. Morgan, Milford, Mass.,	Low in camphor; 70 per cent. U. S. P. strength.
q 6194	Spirit of camphor,	Charles E. Collins, Milford, Mass.,	Low in camphor; 82 per cent. U. S. P. strength.
7590 N	Spirit of peppermint,	Francis P. Downey, Charlestown, Mass.,	Low in oil; 66.4 per cent. U. S. P. strength.
13765	Spirit of peppermint,	W. A. Burnham Company, Lawrence, Mass.,	Low in oil; 66.3 per cent. U. S. P. strength.
7398 N	Denatured alcohol,	Robinson Hardware Company, Lawrence, Mass.,	Denatured alcohol, not properly labeled.
13704	Denatured alcohol,	Mullen & Murch, Lawrence, Mass.,	Denatured alcohol, not properly labeled.
13683	Denatured alcohol,	Bowdoin Hardware Company, Dorchester, Mass.,	Denatured alcohol, not properly labeled.
q 6301	Denatured alcohol,	Gilbert Bros., Brockton, Mass.,	Denatured alcohol, not properly labeled.
6655 R	Denatured alcohol,	Hedden & Bownes, Salem, Mass.,	Denatured alcohol, not properly labeled.
7464 N	Denatured alcohol,	Waters & Brown, Salem, Mass.,	Denatured alcohol, not properly labeled.
7440 N	Denatured alcohol,	Harry T. Wright, Charlestown, Mass.,	Denatured alcohol, not properly labeled.
13711	Denatured alcohol,	Bay State Hardware Company, Boston, Mass.,	Denatured alcohol, not properly labeled.
6657 R	Denatured alcohol,	J. E. Nickerson, Malden, Mass.,	Denatured alcohol, not properly labeled.
13740	Denatured alcohol, "Pyro"	U. S. Industrial Alcohol Company,	Denatured alcohol, not properly labeled.
7508 N	Denatured alcohol,	Carpenter, Morton Company, Boston, Mass.,	Denatured alcohol, not properly labeled.
7510 N	Denatured alcohol,	Jaynes Drug Company, Boston, Mass.,	Denatured alcohol, not properly labeled.
6683 R	Denatured alcohol,	H. C. Girard Company, Lowell, Mass.,	Denatured alcohol, not properly labeled.
6687 R	Denatured alcohol,	The Thompson Hardware Company, Lowell, Mass.,	Denatured alcohol, not properly labeled.
q 6302	Wood alcohol,	Gilbert Bros., Brockton, Mass.,	Wood alcohol, not properly labeled.
13710	Wood alcohol,	H. J. Levy, Boston, Mass.,	Wood alcohol, not properly labeled.
7512 N	Wood alcohol,	Klein Drug Company, Boston, Mass.,	Wood alcohol, not properly labeled.
q 6260	Milk,	John D. Landers, Lynn, Mass.,	Total solids, 10.10 per cent.; fat, 2.60 per cent.; contained added water.
q 6265	Milk,	Darwin F. Heffron, Lynn, Mass.,	Total solids, 10.88 per cent.; fat, 3.20 per cent.; contained added water.

Number of Sample.	Character of Sample	Name of Manufacturer, Wholesaler or Producer.	Results of Analyses.
6603 R	Milk, ...	James S. Wotton, North Chelmsford, . . .	Total solids, 11.10 per cent.; fat, 3.40 per cent.; contained added water.
6605 R			Total solids, 11.10 per cent.; fat, 3.40 per cent.; contained added water.
6607 R			Total solids, 11.10 per cent.; fat, 3 30 per cent.; contained added water.
6609 R			Total solids, 11.42 per cent.; fat, 3.50 per cent.; contained added water.
6611 R			Total solids, 11.40 per cent.; fat, 3.40 per cent.; contained added water.
6613 R			Total solids, 10.60 per cent.; fat, 3.30 per cent.; contained added water.
6615 R			Total solids, 11.00 per cent.; fat, 3.40 per cent.; contained added water.
6625 R			Total solids, 5.70 per cent.; fat, 1.10 per cent.; contained added water.
7552 N	Milk, ...	Charles H. Chace, Swansea, Mass., ...	Total solids, 11.17 per cent.; fat, 3.50 per cent.; contained added water.
7554 N			Total solids, 11.87 per cent.; fat, 3.90 per cent.; contained added water.
7556 N			Total solids, 11.60 per cent.; fat, 3.80 per cent.; contained added water.
7566 N			Total solids, 9.30 per cent.; fat, 3.00 per cent.; contained added water.
6725 R	Milk, ...	Maurice W. Baker, Millis, Mass., ...	Total solids, 11.80 per cent.; fat, 3.80 per cent.; contained added water.
6727 R			Total solids, 11.70 per cent.; fat, 3.60 per cent.; contained added water.
6729 R			Total solids, 11.70 per cent.; fat, 3.60 per cent.; contained added water.
6731 R			Total solids, 12.10 per cent.; fat, 4.20 per cent.; contained added water.
6733 R			Total solids, 11.90 per cent.; fat, 3.90 per cent.; contained added water.
6735 R			Total solids, 12.10 per cent.; fat, 4.30 per cent.; contained added water.

6737 R	Milk, ...	Maurice W. Baker, Millis, Mass., ...	Total solids, 12.06 per cent.; fat, 4.10 per cent.; contained added water.
6739 R			Total solids, 12.10 per cent.; fat, 4.30 per cent.; contained added water.
6741 R			Total solids, 11.72 per cent.; fat, 3.80 per cent.; contained added water.
6743 R			Total solids, 10.30 per cent.; fat, 3.50 per cent.; contained added water.
13797	Milk, ...	Zappla Alefen, Lawrence, Mass., ...	Total solids, 10.36 per cent.; fat, 3.05 per cent.; contained added water.
13798			Total solids, 10.82 per cent.; fat, 3.40 per cent.; contained added water.
13799			Total solids, 10.20 per cent.; fat, 3.00 per cent.; contained added water.
13800			Total solids, 10.84 per cent.; fat, 3.40 per cent.; contained added water.
13801			Total solids, 10.70 per cent.; fat, 3.40 per cent.; contained added water.
13802			Total solids, 10.52 per cent.; fat, 3.20 per cent.; contained added water.
13803			Total solids, 10.09 per cent.; fat, 3.10 per cent.; contained added water.
13723	Milk, ...	Amos P. Best, Dracut, Mass., ...	Total solids, 10.64 per cent.; fat, 3.30 per cent.; contained added water.
13724			Total solids, 10.61 per cent.; fat, 3.30 per cent.; contained added water.
q 6255	Milk, ...	Gustaf Schmidgall, Lynn, Mass., ...	Total solids, 11.70 per cent.; fat, 2.40 per cent.; proteid, 3.44 per cent.; skimmed milk.
q 6308	Milk, ...	H. P. Hood & Sons, Charlestown, Mass., ...	Total solids, 10.78 per cent.; fat, 1.55 per cent.; proteid, 3.38 per cent.; skimmed milk.

INSPECTION OF DAIRIES.

During the month of January, 1911, 228 dairies were examined in the following places: —

Place.	Number examined.	Number found to present no Objectionable Features.	Per Cent.	Number concerning which Letters were sent.	Per Cent.
Easton,	13	8	61.54	5	38.46
Second inspection,	30	19	63.33	11	36.67
Foxborough,	9	4	44.44	5	55.56
Second inspection,	9	6	66.67	3	33.33
Mansfield,	–	–	–	–	–
Second inspection,	15	12	80.00	3	20.00
Milton,	3	3	100.00	–	–
Third inspection,	9	6	66.67	3	33.33
Norton,	3	1	33.33	2	66.67
Second inspection,	11	6	54.45	5	45.55
Sharon,	2	2	100.00	–	–
Second inspection,	4	4	100.00	–	–
Taunton,	5	3	60.00	2	40.00
Second inspection,	6	2	33.33	4	66.67
Walpole,	39	22	56.41	17	43.59
Second inspection,	4	3	75.00	1	25.00

Total number of dairies examined,	228
Number found to be free from objectionable conditions,	101
Number concerning which letters were sent,	61
Total number of conditions to which attention was called,	138
Percentage of dairies which passed inspection,	44.30

In addition to the above, 66 dairies were visited at which the sale of milk had been discontinued.

The names of the owners of the dairies found to be worthy of commendation follow: —

Easton.

Class B.

Alger, Horace * †	Hewitt, Herbert A.* †	Porter, Frank *
Alger, Nathan J.* †	Johnson, J. Theodore *	Randall, Charles * †
Beaty, John *	Lindquest, O. J.*	Randall, Mrs. Mary F.*
Easton Town Farm *	Littlefield, H. B.	Scott, Charles
Ervin, John * †	Maguire, James S.* †	Sylvester, George A.
Farrar, Brooks *	Maliff, Frank H.	Tune, Alexander J.*
Ghen, Norman	Marshall, Estate of John B.*†	White, Frank
Hamilton, Robert	Murray, Alexander *	Williams Bros.*
Heath, H. W.* †	Packard, Irving *	Williams, T. E.

Foxborough.

Class B.

Comey, Herman * †	Hill, Miss S. T.* †	Jackson, Ernest
Daniels, A. J.* †	Hodges, Mrs. H. O.* †	Morton, A.
Foxborough Town Farm	White, W. E.*	Perkins, George
Hersey, I. C.*		

* Second inspection. † Reported favorably on first inspection.

MANSFIELD.

Class A.

Lowney, Walter M.* †

Class B.

Atwood, John M.* †	Flint, Benjamin * †	Mansfield Town Farm *
Carlson, Herman * †	Freeman, George B. * †	Murphy, Alexander *
Cobb, Joseph R.*	Hurley, Edward * †	Schultz, Herman * †
Corrivan, Joseph * †	Jaynes, John E.*	

MILTON.

Class A.

Marshall, Ainsley ‡

Class B.

Brown, John	Farrington, Emory	Reynolds, John ‡
Copeland, Charles C. ‡	Ford, Edward E. ‡	Sanford, Alvin R. ‡
Denis, W. S. ‡	Ludwig, E. O. & Co.	

NORTON.

Class B.

Birkenshaw, John *	Freeman, Mrs. Lucy *	Jackson, Mrs. Adam *
Freeman, Edward	Freeman, S.* †	Leonard, V. H.* †
Freeman, Henry * †		

SHARON.

Class A.

Whipple, Amos

Class B.

Fuller, E. J.*	Goddard, Joseph * †	Morse, Robert G.*
Geissler, Jacob	Leary, George * †	

TAUNTON.

Class B.

Chase, T. C.	Duart, M.	Soper, George O.* †
Dexter, Samuel * †	Howland, J. P.	

WALPOLE.

Class A.

Plimpton, George A.

Class B.

Agnew, David	Fisher, Lyman	Sherer, David
Bock Bros.* †	Foster, F. W.	Shurfelt, C. P.
Buker, Arthur	Gould, Frank L.	Sigamond, Joseph
Cobb, Edwin T.	Hilderbrant, Henry	Tisdale, Percy
Coluccielli, Frank	Morse, Warren	Tunrtsema, John
Ellis, Herbert	Richards, Charles P.	Ware, William T.*
Everett, Edmund	Sexton, Michael	Wheeler, William J. W.
Fisher, Lewis	Shepard, Edward L. * †	Whiting, Harry

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* Second inspection.
† Reported favorably on first inspection.
‡ Third inspection.

MEDICAL AND SURGICAL APPLIANCES IN FACTORIES.[1]

In 1907 the following act was passed relative to keeping medical and surgical appliances in factories (chapter 164, Acts of 1907, amended by section 104, chapter 514 of the Acts of 1909): —

Every person, firm or corporation operating a factory or shop in which machinery is used for any manufacturing or other purpose except for elevators, or for heating or hoisting apparatus, shall at all times keep and maintain, free of expense to the employees, such a medical and surgical chest as shall be required by the board of health of the city or town where such machinery is used, containing plasters, bandages, absorbent cotton, gauze, and all other necessary medicines, instruments and other appliances for the treatment of persons injured or taken ill upon the premises. A person, firm or corporation violating any provision of this section shall be punished by a fine of not less than five dollars nor more than five hundred dollars for every week during which such violation continues.

As the result of an inquiry in regard to the requirements of local health authorities in accordance with the section quoted above, the following data were obtained: —

Of the 354 towns and cities in the State 106 were found to contain no factories or shops to which the law applied. Some requirements were made by the boards of health of 156 towns or cities. The remaining 92 had either made some sort of requirement, the details of which were not reported, or had failed to make any report whatever. Owing to the fact that one particular outfit had been introduced into the factories in 32 towns or cities, the local boards of health made no further requirement.

The outfits required by 156 towns and cities may be classified as follows: —

Those requiring an outfit put up by a particular firm, or the equivalent of the same, ... 67
Those having miscellaneous outfits, 10 of which were insufficient or inadequate, ... 89

It was found that, as a rule, the towns required too many articles, often omitting essentials and putting in their place articles which should not properly be included in a first-aid outfit. The following examples of proprietary preparations included may be cited: —

[1] Reprint from the annual report of the Board for the year 1909.

Recroso ointment.	Kresol.
Kapsikar embrocation.	Thyptus.
Camphenol.	Hydochloxide.
Capsicol.	Encapor ointment.
Unguentine.	Miles's pain pills.
Phenol sodique.	

Other non-essentials found were: —

Arnica.	Witch hazel.
Ergot.	Antipyrin.
Aconite.	Liniment, etc.
Quinine.	

Only in a few instances was there an attempt at uniformity in regulating the size and nature of the outfit to the number of operatives in a factory or to the industry or occupation. A man who employed a dozen men was often compelled to provide the same outfit as one employing a thousand operatives, and it appeared to be more or less of a hardship for the small manufacturers to buy such extensive outfits as were on the market and required by some of the local officials. The same was true of the requirements of other towns, which demanded an equivalent outfit. After the law was passed the large cities made the first requirements, as a rule; then the smaller cities and adjacent towns made the same or nearly the same. In some instances, in the smaller towns, a local physician was consulted as to the preparation of a suitable outfit, and in other instances local druggists prepared an outfit which not infrequently contained various proprietary articles. Only a few towns required a practical, simple outfit, containing essentials without unnecessary articles. It seemed apparent that the meaning of the law was misunderstood, and its value consequently greatly lessened.

A first-aid outfit should contain the necessary articles for first dressing an injury. As a rule, the dressing is applied by a layman to protect the wound and to make the patient comfortable until a physician arrives, or until the patient is sent to a physician or to a hospital. It should be simply a temporary dressing, which may be readily and promptly removed by the physician who has charge of the patient.

From a careful study of the various first-aid outfits now in use, coupled with practical knowledge such as that gained by extensive hospital emergency work, the following list of articles is recommended for requirement by the local health authorities throughout the Commonwealth: —

First-aid packages,[1] sterlized, such as are used in the army and navy (one or more).

Gauze bandages (4 inches, 3 inches and 2 inches, — at least 2 of each).

Sterile gauze in yard packages (3 or 4 packages).

Sheet wadding (one piece).

Canton flannel (1 yard).

Safety pins.

Tourniquet (rubber tubing 24 inches by ¼ inch or ½ inch).

Splint wood.

Zinc oxide adhesive plaster (1 10-yard roll 2 inches wide).

Forceps (1 pair).

Scissors (1 pair).

Boric acid ointment (tube).

Aromatic spirits of ammonia (1 ounce).

Antiseptic (an antiseptic accepted generally by the medical profession, either in solution or tablet form).

One basin.

The above articles should be inclosed in a dust and water proof case. Such articles as are removed at any time from the outfit should be replenished immediately.

Obviously, with such an outfit there should be a few first-aid rules.[2] For example: a physician should be sent for at once. Mere onlookers should be kept back and the patient given plenty of air. The patient should be disturbed as little as possible. Stimulants should be administered only with the knowledge and consent of a physician. In many cases they do positive harm, especially where there has been any bleeding. When dressing a wound one should use care not to handle that part of the dressing which is to be applied to the wound. The sole object of the first-aid dressing is to keep dirt from getting into the wound, which should not be touched with the fingers and handkerchief, or with anything else but the first-aid dressing moistened in the antiseptic solution. Dry gauze, cotton or any other substance should never be applied to an open wound. A sick or injured person should always be made to lie

[1] A first-aid dressing which was prepared under the direction of the Massachusetts Humane Society is well suited for civilian accidents. It is described as follows: the first-aid package consists of several layers of surgical gauze sewed to a wide, firm bandage of unbleached cotton. The gauze is folded in such a way that it makes either a small dressing, or, when unfolded, will cover an area 7 inches square. The size of the gauze is larger than that supplied in the army and navy (where bullet wounds predominate), that it may cover, satisfactorily, the large wound of a compound fracture. The unbleached cotton bandage is rolled in such a way that the pad can be applied to the wound and the cotton bandage fastened around the limb without touching the sterilized gauze. Each package is covered with a piece of cotton cloth sterilized and then done up in paraffin paper.

[2] *Cf.* "Manual for Privates of Infantry of the Organized Militia of the United States," by Capt. M. C. Kerth; also "American National Red Cross Text-book on First-aid and Relief Columns," by Maj. Charles Lynch.

down on his back, if practicable, as in this position the patient is comfortable and the muscles are relaxed. If the face is flushed the head may be raised sufficiently to put a folded coat or small piece of clothing under it. If it is pale it should be kept low. If the patient vomits, his head or both head and body should be turned to one side, so that the matter vomited will not choke him. Tight clothing should be loosened, so as not to interfere with breathing or the circulation of the blood. In case of injury, the heart action is generally weak from shock, and the body grows somewhat cold, so that only such clothing as is necessary to expose the injury should be removed. Clothing may be cut or ripped but never pulled.

In the treatment of fractures it is important to prevent further injury and to keep the wound clean. Neither limb nor patient should be moved more than is absolutely necessary. If it is necessary to move the patient the fractured limb should first be immobilized by splints of some kind, as, for example, a cane, umbrella or piece of wood from a box.

Bleeding from a Wound. — If the blood comes in spurts it can be controlled by a piece of rubber tubing (tourniquet), tied nearer to the heart than to the injury, and placed as tight as possible about the limb. A tourniquet may cause pain and swelling of the limb, and if left on too long may cause the limb to die. The bandage should be loosened, therefore, very carefully every half hour or so, and if the bleeding continues pressure must be applied again. Bleeding from a wound may be controlled by direct pressure on the wound, which must first be covered with a piece of gauze which has been moistened in an antiseptic solution. For burns, a piece of Canton flannel may be covered with boric acid ointment and applied.

It would be advisable to accompany the paper or card containing rules and instructions by pictures and diagrams, to show methods of applying the tourniquet for hemorrhage and to illustrate artificial respiration.

Of the 156 towns and cities which made different requirements in accordance with the law, one or more essential articles were omitted, as follows: no antiseptic was provided in 96 outfits; no tourniquet in 34; no scissors in 26; and no stimulants in 13. In only 7 instances were bottles properly labelled; in only 14 outfits was there a basin; and a book of instructions was lacking in 112 outfits. Many of the towns omitted more than one of the essentials of the first-aid outfit, whereas 1 town, requiring only bandages, cotton, sticking plaster and liniment, omitted seven necessary articles.

An attempt was made to determine the various kinds of accidents or injuries which necessitated a first-aid outfit. Such accidents may be

classified as follows: (1) abrasions; (2) cuts: (*a*) with hemorrhage; (*b*) without hemorrhage; (3) fractures; (4) asphyxiation; for example, from fumes, gases, etc.; (5) burns. It is believed that all accidents or injuries that may occur in a factory are included under these five classes, and that the outfit suggested is sufficient to take care of any injury, provided a proper card of instructions is included. The outfit should be regarded as the minimum requirement or a unit, and if promptly replenished will be sufficient for any factory. If the establishment is a large one, where, owing to the industry or occupation, accidents occur frequently, the supply of gauze or bandages may be increased, or several outfits may be provided. Similarly, if burns are a frequent type of accident, the supply of Canton flannel and boric acid ointment may be increased, etc. It was found that several large factories maintained accident rooms under the charge of a surgeon, nurse or some one instructed in first-aid principles, and that the equipment in such rooms included the essentials of a minor surgery clinic, in addition to a supply of crutches, cots, stretchers, blankets, pillows, etc. While such an accident room in, or connected with, a factory is of great service to both employer and employee, its equipment should not be taken as a basis for making a list of first-aid requirements to be adopted by any local community in the enforcement of the law relative to medical and surgical appliances.

THE STATE BOARD OF HEALTH AND ITS RELATION TO THE MILK PROBLEM IN MASSACHUSETTS.[1]

By Mark W. Richardson, M.D., Secretary to the State Board of Health.

It gives me great pleasure to have the opportunity to-day to present to your association facts bearing upon the relation of the State Board of Health to the milk problem in Massachusetts.

It is just two years since I was appointed secretary to the Board, and one of the first matters to be forced upon my attention was the great friction existing between health authorities and milk producers in relation to the proper handling of milk. To my mind this was a situation much to be deplored, and I have made every effort during the

[1] Read before the Connecticut Valley Breeders Association at Amherst, Jan. 24, 1911; also in part before the Sanitary Section of the Boston Society of Civil Engineers, Feb. 1, 1911.

past two years to the end that this friction between two estimable bodies of citizens should be decreased to the greatest possible extent. I was much pleased, therefore, a few days ago, to learn from one well qualified to speak upon the subject that the feelings of the milk producers of the Commonwealth toward the State Board of Health are much more cordial this year than they have been for ten years past. I only hope that two years from now I shall be able to report a similar degree of progress along these lines.

Now, why should the State Board of Health take any special interest in methods of milk production?

In the first place, section 4 of chapter 75 of the Revised Laws requires that the State Board of Health "shall take cognizance of the interests of health and life among the citizens of the commonwealth, make sanitary investigations and inquiries relative to the causes of disease, and especially of epidemics, the sources of mortality and effects of localities, employments, conditions and circumstances on the public health, and relative to the sale of drugs and food and the adulterations thereof; and shall gather such information relative thereto as it considers proper for diffusion among the people."

Please note especially the sentence "the State Board of Health shall . . . make sanitary investigations and inquiries relative to the causes of disease, and especially of epidemics;" for, if one sanitary fact has become prominent during the past twenty-five years, it is that milk is responsible for a considerable percentage of disease among people of all ages, and that epidemics due to infected milk are far too common.

But, you may ask, are not these matters dealt with adequately by local boards of health? They are on the spot; they are familiar with local conditions; they have almost unlimited power; they should be better able to supervise the milk situation than a central body at the State House in Boston.

Unfortunately, it has been proved in relation to the milk question, as well as to many others, that local authorities do not always realize their responsibilities as they should. They lack knowledge oftentimes, and, even if they have the knowledge, they are likely to be restrained unduly by local friendships and local political conditions from carrying out thoroughly reforms required oftentimes by the gravity of a situation.

The State Board of Health, on the other hand, is so situated that given adequate power, it could with very little trouble undertake a very efficient supervision of the milk problem. It has on its staff men of international reputation in their knowledge of the diseases of animals;

it has laboratories for the thorough bacteriological and chemical examination of milk and water; and it has in its personnel men expert in the study of contagious and infectious diseases in man.

The State Board of Health may lack, perhaps, that intimate knowledge concerning the production of milk and that complete sympathy with the every-day problems of the farmer which are possessed, for instance, by bodies such as the State Board of Agriculture and its Dairy Bureau. There ought to be no real difficulty in remedying this defect, however, and I see no reason why boards of health and boards of agriculture should not be brought more into harmony in dealing with this question, to the end that all parties concerned may receive a square deal.

In an effort to correct undesirable conditions, the State Board of Health, under its general powers, inaugurated five years ago, on a small scale, a system of dairy inspection for the State. It has employed a single inspector, Dr. Alvord H. Rose, a veterinarian, who has spent his entire time in traversing the State and in making reports to the State Board of Health concerning dairy conditions as he found them. Where bad conditions have been found, letters have been sent to the affected dairies, to the local boards of health, and in some instances to the contractors to whom the milk was sold.

The Board has had, to be sure, no power to enforce its suggestions. Whether or not changes have been made as a result of the suggestions has depended entirely upon the co-operation of the dairyman, the local boards of health or upon that of the contractors. In spite of the fact, however, that but one inspector has been employed, so that any one dairy has been visited rarely more often than once in two years, there can be no doubt that through this inspection, assisted by the co-operation of some boards of health and of some farmers and contractors, and more especially in recent years by increased interest of the consumer, the general character of dairy farms in Massachusetts has improved to a very considerable degree, as will be seen from the accompanying table. There is still, however, much room for improvement, and to my mind the health of the State will not be properly conserved until an adequate system of dairy inspection, and one embracing the whole State, has been inaugurated.

Inspection of Massachusetts Dairies.

	Total Number of Dairies examined.	Number of Dairies found to be without Objectionable Feature.	Per Cent Clean Dairies.
1905,[1]	2,151	431	20.04
1906,[2]	3,267	1,048	32.08
1907,[3]	2,054	704	34.27
1908,[3]	2,213	1,185	53 55
1909,[3]	1,439	681	47.32
1910,[3]	1,983	1,283	64.70
	13,107	5,332	40.68

[1] Seven months ended September 30.
[2] Fourteen months ended November 30.
[3] Year ended November 30.

I have been asked to deal with this question as much as possible from the farmers' point of view. I am afraid this will be a little hard for one who has had practically no farming experience. I will try, however, to put the matter as I see it, and in as concrete form as possible.

If we begin at the beginning, so to speak, and look into the condition of the animal which produces the milk, we find that there are a number of diseases in cows which may be transmitted to human beings. Most important among these diseases is bovine tuberculosis. Other diseases, less important, are garget, anthrax, actinomycosis, rabies and foot-and-mouth disease. It is perfectly true that bovine tuberculosis is not so dangerous to human health as was once thought. Pulmonary tuberculosis, or consumption, has never been traced to the bovine bacillus. On the other hand, most recent researches on this subject have shown that tuberculosis of bones, joints and glands, and especially in children and young adults, is in a large proportion of cases due to the bovine bacillus. When we consider that probably 15 per cent. of cattle in Massachusetts are afflicted with bovine tuberculosis, and that the examination of market milk in all our large cities shows a certain percentage to be infected with bovine tuberculosis, it needs no argument to show that every effort should be made to eradicate this disease from the cattle of Massachusetts, not only from the financial point of view of the farmer himself, but also from the point of view of the public health. I offer no plan for this eradication. It is a very difficult subject, but it is a problem which must be settled, in order that all parties interested may secure their just dues.

It is a fact that cows may be infected to a certain extent with tuberculosis, and yet, if proper care be taken, tubercle bacilli will not get into the milk; that is to say, in mild forms of tuberculosis, unless the udder

itself is affected, it is probable that the tubercle bacilli would not reach the milk if proper care were taken of the feces. But it has been shown, in some instances, that cows not largely infected with this disease may excrete the bacilli in tremendous numbers in the feces, and, because adequate care is not taken of these feces, they do get into the milk, and are in this manner transferred from cattle to man; that is to say, when we make the criticism that the cows are not kept clean and the tie-ups are not clean, we are making an endeavor so to change the situation in a dairy that feces will be kept out of the milk. If the cows are properly cleaned, if the tie-up is kept clean, if the manure is properly taken care of, there should be little danger from milk, even though the cow be slightly diseased with tuberculosis in other portions of the body than the udder.

At this point it may be well to mention that our dairy inspector has been criticised many times for the recommendation that horse manure should not be used as a bedding for cows. In my opinion, excreta from any source must be kept as far as possible from the milk. Both animals and man, in sickness and health, may harbor disease germs in their feces, urines, and in the secretions of the mouth and nose; and you will realize the importance of this point when I say that possibly the disease known as infantile paralysis may be spread through the agency of horse manure. Certain it is that there has been noted, especially in the West, a disease associated with paralysis, and affecting mainly young horses. Hill of Minnesota feels very strongly that horses have something to do with this disease, and that it is spread, in part at least, through dust infected with horse manure.

Then, again, we have occasion at times to advise that pigs be removed to a distance from the barn; and many farmers fail to see the reason for this. Here, again, we have to do with an animal which is distinctly filthy in its habits, and pig-pens are in most instances the place of deposit for excreta and waste of all sorts. For this reason they should be removed as far as possible from the tie-ups, especially when we learn, as has been shown recently, that the paratyphoid bacillus, a cause of meat poisoning, is a common inhabitant of the intestinal tract of normal pigs.

It would, however, be of no use to keep the cow clean or the tie-up clean, if the person who milks the cows is allowed to go dirty. If the farm hand does not wash his hands before milking, and wears filthy clothes, particles of filth of all kinds will get into the milk; and in this instance the danger may be even greater than when the cow is severely

diseased, for there are a number of human diseases which, if proper care is not taken, may be transmitted through milk and be the cause of extensive epidemics. Chief of these diseases is typhoid fever.

In this connection, one of the criticisms which we frequently have to make is that the privy for the use of farm hands is in the immediate neighborhood, if not within, the tie-up. When it is considered that 4 per cent. of all typhoid fever patients become what are known as chronic carriers of the disease, — that is to say, they may harbor within their feces or urines typhoid bacilli for weeks, months or even years, — it is apparent that a privy in the immediate neighborhood of the cow tie-up, or the milk room, or the water supply, may be a very serious danger to health; for these excretions, if transferred to the milk either on the hands of the milkers or through the intermediary action of flies, may start an epidemic of typhoid fever in some neighboring or distant locality. Similar dangers appertain to scarlet fever, diphtheria, dysentery and other diarrhœal diseases. It is, therefore, essential that not only the cows should be under expert supervision, but also that those who take care of the cows should be under such inspection that animal and human diseases may not be transferred through the milk to the citizens of the Commonwealth.

The criticisms applying to those who milk would apply, of course, to those who may have occasion afterwards to be brought in contact with this product. The persons who strain the milk and the utensils which they use in handling the milk must be in as cleanly a condition as possible. The cans must be clean, not only from the ordinary point of view, but from the bacteriological point of view; that is, they should be free not only from coarse dirt, but free from microscopic dirt, and this can be accomplished only by complete sterilization of the cans, preferably by heat. The milk must be kept at a proper temperature, so that the few germs which are bound, in any event, to be present in the milk may not multiply indefinitely before reaching the consumer.

The water supply on any farm must be above suspicion, for milk clean in itself has oftentimes been contaminated by sewage-polluted water, so that a disease-producing fluid has resulted. In many instances the milk is cooled in the well; and it is perfectly apparent that if this well is not in proper condition, contamination may result through imperfect stoppers, etc. Another common practice is to cool milk in a watering trough. Here, again, there is danger of transfer of disease from tuberculous cattle drinking at the trough, or from horses infected with glanders or with other disease in the respiratory tract.

The milk must be transported under proper conditions, and must be under such supervision that disease germs do not gain access to the milk from those employed by the railroad or by the contractors. Furthermore, contractors must not be allowed so to mix their milk that one infected dairy may spread a disease broadcast through a contractor's supply.

Finally, no adequate view of the situation can be had until the consumer is properly educated to take care of his milk after he has received it.

As I look over this situation, it really seems to me that the question is not so difficult as many people make it out to be. I think probably the hardest problem to solve is that of the eradication of tuberculosis in the cattle themselves; for, if we start with a healthy herd of cows, the rest of the problem seems to resolve itself into one of ordinary attention to the rules of cleanliness. I do not believe that in order to produce healthful milk the farmer must put himself to a large added expense. To my mind it is simply a question of elbow grease, soap and hot water. Clean your cows, clean your tie-up, clean the udders, clean your hands, clean your milk utensils, clean your cans and keep your milk cool, and you will have satisfied practically all of the important conditions.

As I said, I do not believe that in many instances it will be necessary for farmers to go to much expense in order to bring their plant into proper shape for the production of a healthful milk supply. I do, however, think it is probable that the farmer does not, at the present time, get a sufficient return for the labor expended in this branch of the dairy industry; and I believe that if all the agencies interested in this question — the farmers, the health boards and the consumers — can get together and bring about improvement in the character of the milk supply of this State, the farmer can demand and will get for his product an increased price, and one sufficient to recompense him for the increased care which he gives to it.

It will be noted that thus far in this discussion I have not touched upon the question of the chemical standard of milk as defined by the statutes of the Commonwealth. Strictly speaking, this is not a subject properly within the sphere of a health body, but is one rather of economic interest. Looked at from the point of view of the consumer, the points at issue seem to me about as follows: if we must have a fixed price for milk, as is the case at present, we must also have a standard of food value to correspond with that price. It does not seem to me

to make much difference where you put a standard of milk, provided you are willing at the same time to require of every producer that he shall receive for his milk a price corresponding to its food value; for it is manifestly unjust that a producer of milk rich in butter fat should receive for his product a price similar to that paid to the producer of a milk very much weaker in butter fat. If it were possible to have a number of different standards of milk, with prices corresponding to those standards, I believe that we should come much nearer to a just solution of this standard question than has ever been reached up to the present time. I am not, however, in sympathy at the present time with any attempt to lower the standard of milk in the State of Massachusetts. It has been the experience of the State Board of Health that over 80 per cent. of all the samples of milk brought to the State House for examination come above the standard as at present enacted. There seems to me no reason whatever, if 80 per cent. of the milk produced in this State is above the standard, why the other 20 per cent. should not also conform to that standard.

In almost every instance where substandard milk is found, it is either due to the fact that herds of cattle well known to give a large amount of low standard milk are kept, or that with mixed herds the producers do not take the trouble to mix the milk from the various cows. With a mixed herd the milk is practically certain to be above the standard if the milk from the individual cows has been properly mixed. With the best of care, however, it is apparent that from time to time substandard milk will be found in the supply of any producer. That a producer should be prosecuted for an occasional lapse from the standard always seemed to me distinctly unjust, and very shortly after my accession to the secretaryship of the Board I instituted a system of letters warning producers that their milk was not up to the proper standard. It was natural, therefore, that last year, when the question of a change in the law came up, I should be distinctly in sympathy with the proposition for a change, making it necessary that warnings should be given producers before they should be brought into court. I do not say that the law is perfect as it stands, but it is certainly a great improvement over what it was. Since that law was passed, last year, I have sent out a very large number of warnings to various producers, and these warnings have been followed up in a considerable number of cases by the taking of several samples from these same producers, and in no instance, as yet, has a prosecution been brought under the substandard law. This shows what was to be expected: that

the producer, when notified that his milk was below the standard, would take the measures necessary to correct the conditions which brought his product below the standard required by law.

To conclude, then, I believe that at present the great parties at interest in this matter of milk are nearer together than they have been ever before; and I do hope that matters will so shape themselves that the State of Massachusetts will have in the near future a milk supply which is worthy the producer and which will be satisfactory to health authorities and the consumer.

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Approved by
The State Board of Publication.

WEEKLY RETURNS OF DEATHS FROM CITIES AND TOWNS OF MORE THAN 10,000 POPULATION.

Week ending Feb. 4, 1911.

CITIES AND TOWNS.	Population. Census for 1910.	Reported Deaths in Each.	Deaths under Five Years.	Deaths from—					
				Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diphtheria.	Typhoid Fever	Measles.
Boston,	670,585	220	55	75	31	17	2	–	1
Worcester,	145,986	53	16	12	3	5	–	–	–
Fall River,	119,295	38	17	19	10	2	–	–	–
Lowell,	106,294	42	13	19	15	1	–	–	–
Cambridge,	104,839	22	5	8	5	1	1	–	–
New Bedford,	96,652	29	8	12	9	2	–	–	–
Lynn,	89,336	23	3	4	2	1	–	–	–
Springfield,	88,926	33	9	10	5	–	–	–	–
Lawrence,	85,892	32	12	16	7	3	1	–	4
Somerville,	77,236	19	3	6	4	2	–	–	–
Holyoke,	57,730	18	5	6	4	–	1	–	–
Brockton,	56,878	19	4	3	1	–	–	–	–
Malden,	44,404	20	3	8	4	1	–	–	–
Haverhill,	44,115	18	7	7	4	1	–	–	–
Salem,	43,697	18	5	4	2	2	–	–	–
Newton,	39,806	6	2	1	1	–	–	–	–
Fitchburg,	37,826	14	3	6	1	3	1	–	–
Taunton,	34,259	18	3	9	6	1	1	–	–
Everett,	33,484	7	2	2	1	1	–	–	–
Quincy,	32,642	8	2	1	1	–	–	–	–
Chelsea,	32,452	8	2	–	–	–	–	–	–
Pittsfield,	32,121	7	–	2	1	1	–	–	–
Waltham,	27,834	12	1	2	1	–	–	–	–
Brookline,	27,792	5	–	–	–	–	–	–	–
Chicopee,	25,401	15	7	3	2	1	–	–	–
Gloucester,	24,398	6	–	–	–	–	–	–	–
Medford,	23,150	8	1	3	3	–	–	–	–
North Adams,	22,019	7	–	3	1	1	–	–	–
Northampton,	19,431	7	1	1	–	–	–	–	–
Beverly,	18,650	3	1	2	1	–	–	–	–
Revere,	18,219	4	–	2	1	–	–	–	–
Leominster,	17,580	4	–	1	1	–	–	–	–
Attleborough,	16,215	6	3	4	3	1	–	–	–
Westfield,	16,044	5	1	3	–	3	–	–	–
Peabody,	15,721	9	–	7	4	1	–	–	–
Melrose,	15,715	3	0	1	1	–	–	–	–
Hyde Park,	15,507	4	1	1	1	–	–	–	–
Woburn,	15,308	2	0	1	1	–	–	–	–
Newburyport,	14,949	5	–	3	3	–	–	–	–
Gardner,	14,699	5	0	2	–	–	–	–	–
Marlborough,	14,579	5	0	3	2	–	–	–	–
Clinton,	13,075	1	–	–	–	–	–	–	–
Milford,	13,055	6	3	3	2	–	–	–	–
Adams,	13,026	3	2	–	–	–	–	–	–
Framingham,	12,948	3	0	3	2	1	–	–	–
Weymouth,	12,895	–	–	–	–	–	–	–	–
Watertown,	12,875	3	1	2	2	–	–	–	–
Southbridge,	12,592	3	–	2	1	1	–	–	–
Plymouth,	12,141	–	–	–	–	–	–	–	–
Webster,	11,509	6	1	2	–	1	1	–	–
Methuen,	11,448	2	–	1	–	1	–	–	–
Wakefield,	11,404	9	–	5	4	–	–	–	–
Arlington,	11,187	4	0	1	1	–	–	–	–
Greenfield,	10,427	2	–	–	–	–	–	–	–
Winthrop,	10,132	2	–	–	–	–	–	–	–
Recapitulation.									
Total of reporting towns,	2,581,344	831	202	291	154	55	8	–	5

WEEK ENDING FEB. 11, 1911.

CITIES AND TOWNS.	Population. Census for 1910.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM— Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	670,585	260	60	107	61	24	2	1	–
Worcester,	145,986	40	4	7	5	2	–	–	–
Fall River,	119,295	42	21	22	10	3	1	–	–
Lowell,	106,294	26	5	7	2	5	–	–	–
Cambridge,	104,839	43	15	16	8	3	2	–	–
New Bedford,	96,652	44	10	11	9	–	1	–	–
Lynn,	89,336	27	7	6	5	1	–	–	–
Springfield,	88,926	24	2	8	7	1	–	–	–
Lawrence,	85,892	40	14	15	7	4	1	–	1
Somerville,	77,236	29	3	5	2	2	–	1	–
Holyoke,	57,730	23	7	10	5	3	–	–	–
Brockton,	56,878	13	1	7	3	–	1	–	–
Malden,	44,404	18	4	7	1	5	–	–	–
Haverhill,	44,115	16	–	6	1	–	1	–	–
Salem,	43,697	22	5	4	3	1	–	–	–
Newton,	39,806	17	5	4	3	1	–	–	–
Fitchburg,	37,826	11	4	3	2	–	1	–	–
Taunton,	34,259	14	3	3	2	–	–	–	–
Everett,	33,484	7	–	4	2	1	–	–	–
Quincy,	32,642	13	1	5	1	2	–	–	–
Chelsea,	32,452	11	1	3	3	–	–	–	–
Pittsfield,	32,121	14	4	5	3	–	–	–	2
Waltham,	27,834	6	0	1	–	–	–	–	–
Brookline,	27,792	6	–	2	1	1	–	–	–
Chicopee,	25,401	8	3	2	1	–	–	–	–
Gloucester,	24,398	6	–	1	–	1	–	–	–
Medford,	23,150	7	3	4	–	1	–	–	–
North Adams,	22,019	8	2	–	–	–	–	–	–
Northampton,	19,431	8	1	2	2	–	–	–	–
Beverly,	18,650	4	1	–	–	–	–	–	–
Revere,	18,219	5	2	2	1	1	–	–	–
Leominster,	17,580	5	2	2	2	–	–	–	–
Attleborough,	16,215	2	0	1	–	1	–	–	–
Westfield,	16,044	9	1	2	–	1	–	–	–
Peabody,	15,721	5	–	–	–	–	–	–	–
Melrose,	15,715	5	0	1	–	1	–	–	–
Hyde Park,	15,507	3	0	–	–	–	–	–	–
Woburn,	15,308	5	1	–	–	–	–	–	–
Newburyport,	14,949	8	1	3	1	1	–	–	–
Gardner,	14,699	3	0	2	1	1	–	–	–
Marlborough,	14,579	4	1	1	–	–	–	–	–
Clinton,	13,075	8	2	1	1	–	–	–	–
Milford,	13,055	4	2	–	–	–	–	–	–
Adams,	13,026	2	1	–	–	–	–	–	–
Framingham,	12,948	4	2	2	2	–	–	–	–
Weymouth,	12,895	–	–	–	–	–	–	–	–
Watertown,	12,875	1	1	1	–	–	–	–	–
Southbridge,	12,592	1	–	1	1	–	–	–	–
Plymouth,	12,141	–	–	–	–	–	–	–	–
Webster,	11,509	6	2	5	2	1	2	–	–
Methuen,	11,448	3	–	–	–	–	–	–	–
Wakefield,	11,404	3	–	2	–	–	–	–	–
Arlington,	11,187	3	1	2	2	–	–	–	–
Greenfield,	10,427	1	–	1	–	1	–	–	–
Winthrop,	10,132	3	–	1	1	–	–	–	–
Recapitulation.									
Total of reporting towns,	2,581,344	900	205	307	163	69	12	2	3

WEEK ENDING FEB. 18, 1911.

CITIES AND TOWNS.	Population. Census for 1910.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM— Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	670,585	265	64	122	70	33	2	–	2
Worcester,	145,986	42	7	14	8	–	–	–	–
Fall River,	119,295	54	22	29	15	9	–	–	–
Lowell,	106,294	43	14	20	17	1	1	–	–
Cambridge,	104,839	37	14	20	13	2	2	–	–
New Bedford,	96,652	31	10	14	8	3	1	–	–
Lynn,	89,336	25	3	9	5	3	–	–	–
Springfield,	88,926	41	6	16	6	6	1	1	–
Lawrence,	85,892	29	11	14	9	3	–	–	–
Somerville,	77,236	31	6	17	11	3	1	–	–
Holyoke,	57,730	18	3	9	7	2	–	–	–
Brockton,	56,878	17	3	8	5	2	1	–	–
Malden,	44,404	17	4	5	3	1	–	–	–
Haverhill,	44,115	19	–	5	2	1	–	–	–
Salem,	43,697	16	4	6	3	1	1	–	–
Newton,	39,806	9	2	3	2	–	–	–	1
Fitchburg,	37,826	11	4	4	4	–	–	–	–
Taunton,	34,259	20	2	12	7	4	–	–	–
Everett,	33,484	12	–	3	2	–	–	–	–
Quincy,	32,642	4	2	–	–	–	–	–	–
Chelsea,	32,452	10	0	5	1	2	–	–	–
Pittsfield,	32,121	12	3	2	1	1	–	–	–
Waltham,	27,834	6	1	1	1	–	–	–	–
Brookline,	27,792	8	–	2	1	–	–	1	–
Chicopee,	25,401	5	0	3	3	–	–	–	–
Gloucester,	24,398	4	2	–	–	–	–	–	–
Medford,	23,150	5	–	–	–	–	–	–	–
North Adams,	22,019	5	2	2	–	–	1	–	–
Northampton,	19,431	13	3	6	1	3	1	–	–
Beverly,	18,650	9	4	3	2	–	–	–	–
Revere,	18,219	6	1	1	1	–	–	–	–
Leominster,	17,580	4	1	2	2	–	–	–	–
Attleborough,	16,215	6	1	–	–	–	–	–	–
Westfield,	16,044	5	1	2	2	–	–	–	–
Peabody,	15,721	–	–	–	–	–	–	–	–
Melrose,	15,715	3	0	–	–	–	–	–	–
Hyde Park,	15,507	3	0	1	–	1	–	–	–
Woburn,	15,308	3	0	–	–	–	–	–	–
Newburyport,	14,949	8	2	3	3	–	–	–	–
Gardner,	14,699	3	2	1	1	–	–	–	–
Marlborough,	14,579	7	1	2	2	–	–	–	–
Clinton,	13,075	3	–	1	1	–	–	–	–
Milford,	13,055	5	0	3	3	–	–	–	–
Adams,	13,026	5	1	–	–	–	–	–	–
Framingham,	12,948	6	2	1	–	–	–	–	–
Weymouth,	12,895	–	–	–	–	–	–	–	–
Watertown,	12,875	1	0	1	1	–	–	–	–
Southbridge,	12,592	2	1	1	1	–	–	–	–
Plymouth,	12,141	–	–	–	–	–	–	–	–
Webster,	11,509	1	1	–	–	–	–	–	–
Methuen,	11,448	3	–	1	–	1	–	–	–
Wakefield,	11,404	3	–	–	–	–	–	–	–
Arlington,	11,187	1	1	1	1	–	–	–	–
Greenfield,	10,427	0	–	–	–	–	–	–	–
Winthrop,	10,132	6	–	3	3	–	–	–	–
Recapitulation.									
Total of reporting towns,	2,565,623	902	211	378	228	82	12	2	3

WEEK ENDING FEB. 25, 1911.

CITIES AND TOWNS.	Population. Census for 1910.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM— Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	670,585	280	51	99	52	18	5	1	–
Worcester,	145,986	59	10	19	10	6	1	–	–
Fall River,	119,295	51	23	22	9	7	–	–	2
Lowell,	106,294	34	9	11	6	2	1	1	–
Cambridge,	104,839	40	10	14	5	4	1	–	1
New Bedford,	96,652	41	19	13	5	6	–	–	–
Lynn,	89,336	24	7	11	7	2	1	–	–
Springfield,	88,926	22	4	12	8	2	–	1	–
Lawrence,	85,892	29	10	18	9	1	–	1	–
Somerville,	77,236	30	7	12	4	3	1	–	–
Holyoke,	57,730	18	6	6	3	3	–	–	–
Brockton,	56,878	14	3	7	3	2	–	–	–
Malden,	44,404	11	2	3	2	1	–	–	–
Haverhill,	44,115	13	1	6	5	1	–	–	–
Salem,	43,697	18	5	4	2	1	–	–	–
Newton,	39,806	10	3	3	1	2	–	–	–
Fitchburg,	37,826	8	–	–	–	–	–	–	–
Taunton,	34,259	14	4	6	4	1	–	–	–
Everett,	33,484	7	1	3	2	–	–	–	–
Quincy,	32,642	7	2	2	2	–	–	–	–
Chelsea,	32,452	22	5	7	7	–	–	–	–
Pittsfield,	32,121	5	–	1	1	–	–	–	–
Waltham,	27,834	7	0	1	1	–	–	–	–
Brookline,	27,792	10	1	1	1	–	–	–	–
Chicopee,	25,401	3	1	3	2	–	–	–	–
Gloucester,	24,398	6	–	5	4	1	–	–	–
Medford,	23,150	5	1	1	1	–	–	–	–
North Adams,	22,019	8	2	3	1	1	–	–	–
Northampton,	19,431	8	0	2	1	–	–	–	–
Beverly,	18,650	9	2	–	–	–	–	–	–
Revere,	18,219	3	–	1	1	–	–	–	–
Leominster,	17,580	5	1	2	1	–	–	1	–
Attleborough,	16,215	5	1	1	–	–	–	–	–
Westfield,	16,044	5	1	2	–	1	1	–	–
Peabody,	15,721	–	–	–	–	–	–	–	–
Melrose,	15,715	0	–	–	–	–	–	–	–
Hyde Park,	15,507	3	0	1	–	1	–	–	–
Woburn,	15,308	4	2	1	1	–	–	–	–
Newburyport,	14,949	8	–	1	1	–	–	–	–
Gardner,	14,699	6	1	4	4	–	–	–	–
Marlborough,	14,579	3	0	2	2	–	–	–	–
Clinton,	13,075	5	–	–	–	–	–	–	–
Milford,	13,055	6	1	4	4	–	–	–	–
Adams,	13,026	2	1	1	–	–	1	–	–
Framingham,	12,948	1	0	1	1	–	–	–	–
Weymouth,	12,895	–	–	–	–	–	–	–	–
Watertown,	12,875	2	0	1	–	–	–	1	–
Southbridge,	12,592	2	1	–	–	–	–	–	–
Plymouth,	12,141	–	–	–	–	–	–	–	–
Webster,	11,509	1	–	–	–	–	–	–	–
Methuen,	11,448	3	1	–	–	–	–	–	–
Wakefield,	11,404	–	–	–	–	–	–	–	–
Arlington,	11,187	3	1	1	1	–	–	–	–
Greenfield,	10,427	3	–	1	1	–	–	–	–
Winthrop,	10,132	2	–	1	1	–	–	–	–
Recapitulation.									
Total of reporting towns,	2,554,219	885	200	320	176	66	12	6	3

WEEKLY RETURNS OF DEATHS FROM CERTAIN INFECTIOUS DISEASES.

Deaths from Infectious Diseases not specifically mentioned in above Tables during the Weeks of Feb. 4, 11, 18 and 25, 1911.

DISEASE.	Place.	Week ending — Feb. 4.	Feb. 11.	Feb. 18.	Feb. 25.
Cerebro-spinal meningitis,	Boston,	1	1	–	1
	Brockton,	1	–	–	1
	Haverhill,	–	1	–	–
	Lawrence,	–	–	–	3
	Lynn,	–	–	–	1
	New Bedford,	–	–	–	1
	North Adams,	–	–	–	1
	Salem,	–	–	1	–
	Somerville,	–	–	1	–
	Worcester,	1	–	–	1
Scarlet fever,	Boston,	5	2	–	3
	Brockton,	–	–	–	1
	Fitchburg,	1	–	–	–
	Haverhill,	1	3	–	–
	Malden,	2	1	–	–
	Northampton,	–	–	1	–
	Quincy,	–	2	–	–
	Revere,	1	–	–	–
Whooping cough,	Beverly,	1	–	–	–
	Boston,	4	3	5	4
	Cambridge,	–	–	1	–
	Fall River,	–	–	1	1
	Lawrence,	1	–	–	–
	Lowell,	1	–	–	–
	Lynn,	1	–	–	–
	Salem,	–	–	–	1
	Springfield,	1	–	1	–
	Taunton,	–	1	1	–
Erysipelas,	Boston,	1	2	1	–
	Chelsea,	–	–	1	–
	Everett,	–	–	–	1
	Fall River,	–	1	2	–
	Lowell,	1	–	–	–
	Lynn,	–	–	1	–
	Malden,	1	–	1	–
	Milford,	1	–	–	–
	New Bedford,	1	–	1	–
	Somerville,	–	–	1	1
	Springfield,	2	–	–	–
	Waltham,	1	–	–	–
	Watertown,	–	1	–	–

DEATHS FROM INFECTIOUS DISEASES, ETC. — *Concluded.*

DISEASE.	Place.	WEEK ENDING —			
		Feb. 4.	Feb. 11.	Feb. 18.	Feb. 25.
Tuberculosis other than pulmonary.	Beverly,	–	–	1	–
	Boston,	4	3	5	7
	Brockton,	–	3	–	–
	Cambridge,	1	–	–	–
	Chelsea,	–	–	1	–
	Chicopee,	–	–	–	1
	Everett,	–	1	1	–
	Fall River,	–	2	–	–
	Gardner,	2	–	–	–
	Haverhill,	–	–	1	–
	Holyoke,	1	2	–	–
	Lawrence,	–	1	–	2
	Lowell,	1	–	1	1
	Marlborough,	1	–	–	–
	Medford,	–	2	–	–
	New Bedford,	–	1	–	–
	Newburyport,	–	1	–	–
	North Adams,	–	–	1	–
	Northampton,	1	–	–	–
	Peabody,	2	–	–	–
	Somerville,	–	–	–	1
	Springfield,	2	–	–	–
	Taunton,	–	–	–	1
	Wakefield,	1	–	–	–
	Westfield,	–	1	–	–
	Worcester,	3	–	6	1
Meningitis other than cerebro-spinal.	Framingham,	–	–	1	–
	Wakefield,	–	1	–	–
Influenza,	Attleborough,	–	–	–	1
	Boston,	1	3	1	2
	Cambridge,	–	1	1	2
	Haverhill,	1	–	–	–
	Lawrence,	–	1	–	1
	Marlborough,	–	1	–	–
	North Adams,	1	–	–	–
	Northampton,	–	–	–	1
	Somerville,	–	–	–	1
	Waltham,	–	1	–	–
Anterior poliomyelitis,	Fall River,	1	–	–	–
	Medford,	–	1	–	–
Glanders,	Haverhill,	–	–	1	–
Tetanus,	Wakefield,	–	1	–	–

WEEKLY RETURNS OF CASES OF INFECTIOUS DISEASES.

Cases of Infectious Diseases reported during the Weeks of Feb. 4, 11, 18 and 25, 1911.

[Under the provisions of section 52 of chapter 75 of the Revised Laws.]

	Week ending—				
	Feb. 4.	Feb. 11.	Feb. 18.	Feb. 25.	Total.
Diphtheria,	420	148	136	149	853
Measles,	373	332	316	307	1,328
Scarlet fever,	173	195	163	164	695
Typhoid fever,	15	25	21	27	88
Tuberculosis, pulmonary,	127	153	137	137	554
Tuberculosis other than pulmonary,	2	2	3	–	7
Cerebro-spinal meningitis,	2	3	6	6	17
Meningitis other than cerebro-spinal,	2	–	–	–	2
Whooping cough,	113	116	101	73	403
Varicella,	53	104	52	52	261
Ophthalmia neonatorum,	19	29	24	46	118
Anterior poliomyelitis,	1	–	1	1	3
Mumps,[1]	5	9	18	13	45
Erysipelas,[1]	1	2	2	2	7
Trachoma,	1	–	–	–	1
Tetanus,	–	–	1	–	1
Glanders,	–	–	1	–	1

[1] Erysipelas and mumps are not diseases notifiable under section 52 of chapter 75 of the Revised Laws. The figures concerning these diseases are, therefore, incomplete.

MONTHLY REPORT ON INSPECTION OF FOOD AND DRUGS.

The following summary presents the results of the examination of food and drugs made by the State Board of Health during the month of February, 1911:—

Articles examined.	Number found to be of Good Quality.	Number adulterated or varying from the Legal Standard.	Total.	Articles examined.	Number found to be of Good Quality.	Number adulterated or varying from the Legal Standard.	Total.
Butter,	3	–	3	Lard,	2	–	2
Cheese,	1	–	1	Maple sugar,	5	1	6
Cider,	1	–	1	Maple syrup,	6	–	6
Cocoa,	3	–	3	Meat products:—			
Condensed milk,	5	2	7	Hamburg steak,	2	–	2
Confectionery,	7	–	7	Sausages,	5	6	11
Corn starch,	1	–	1	Pressed meat,	1	–	1
Cream,	13	–	13	Milk,	223	34	257
Cream of tartar,	3	–	3	Olive oil,	15	9	24
Drugs,	35	20	55	Pastry,	1	–	1
Extract of vanilla,	1	–	1	Peanut butter,	1	–	1
Flour,	1	–	1	Pickles,	2	–	2
Gelatine,	1	–	1	Rice,	2	6	8
Grape juice,	1	–	1	Spices,	6	–	6
Honey,	1	–	1	Table sauce,	2	6	8
Hulled corn,	1	–	1				
Jams,	1	–	1	Total,	352	84	436

The cities and towns in which samples were collected were Adams, Arlington, Attleborough, Boston, Cambridge, Chelsea, Dracut, Fall River, Franklin, Holyoke, Lawrence, Lowell, Malden, Marlborough, Medford, Melrose, Natick, Newton, North Attleborough, Peabody, Quincy, Salem, Somerville, South Framingham, Springfield, Stoneham, Waltham, Walpole, Webster, Wilmington and Worcester.

PROSECUTIONS FOR VIOLATIONS OF THE LAW RELATING TO FOOD AND DRUGS.

Fifteen convictions were secured during the month of February, 1911, for selling adulterated food and drugs as follows: —

No.	Name of Defendant.	Place.	Character of Article sold.
1	John T. Cushman,	Newton,	Alcohol (denatured).[1]
2	John T. Cushman,	Newton,	Alcohol (denatured).[1]
3	Columbus G. Carley,	Newton,	Alcohol (denatured).[1]
4	Thomas F. Cannon,	Boston,	Cider.[2]
5	John Lapos,	Melrose,	Cider.[2]
6	Maurice W. Baker,	Millis,	Milk (total solids, 10.30).
7	Leonidas Ballard,	Dudley,	Milk (watered: can not marked).
8	Leonidas Ballard,	Dudley,	Milk (total solids, 4.70; skimmed).
9	Joseph E. Banville,	Swansea,	Milk (total solids, 11.62).[3]
10	Chas. U. Chace,	Swansea,	Milk (total solids, 9.30).[3]
11	James S. Wotton,	Chelmsford,	Milk (total solids, 5.70).[3]
12	Hans Neilson,	Oxford,	Milk (total solids, 9.94).[3]
13	Zephiren Loranger,	Lowell,	Sausage.[4]
14	Zephiren Loranger,	Lowell,	Sausage.[4]
15	Francis P. Downey,	Boston,	Spirit of peppermint (below standard).

[1] Improperly labeled. [2] Contained benzoic acid. [3] Watered. [4] Contained cereal.

Fines imposed, $395.

Number of Sample.	Character of Sample.	Name of Manufacturer, Wholesaler or Producer.	Results of Analyses.
13930	Olive oil, with cotton salad oil.	Berti Brand,	Percentage of ingredients not stated on label.
13932	Olive oil and salad oil,	Olio Sopraffino Francescani Brand,	Percentage of ingredients not stated on label.
13931	Olive oil and cotton salad oil.	Superior quality oil, Winter pressed, Spiroplo Brand,	Percentage of ingredients not stated on label.
13943	Olive oil and cotton salad oil.	Tropani Brand,	Percentage of ingredients not stated on label.
13945	Olive oil,	Olio D'oliva Sopraffino, di Sorrento, / Masaniello Pure olive oil, Donato Maddaloni,	Contained 60 per cent. cotton seed oil.
7632 N	Denatured alcohol,	H. J. Doherty, Boston, Mass.,	Not properly labeled.
7640 N	Denatured alcohol,	Martin & Costello, South Boston, Mass.,	Not properly labeled.
7656 N	Denatured alcohol,	Epstein Drug Company, Boston, Mass.,	Not properly labeled.
7674 N	Denatured alcohol,	Coleman & Donovan, Boston, Mass.,	Not properly labeled.
13819	Denatured alcohol,	Joseph Spang & Co., Boston, Mass.,	Not properly labeled.
13921	Denatured alcohol,	H. J. Levy, Boston, Mass.,	Not properly labeled.
13922	Denatured alcohol,	Bay State Hardware Company, Boston, Mass.,	Not properly labeled.
13725	Denatured alcohol,	Wadsworth Howland & Co., Boston, Mass.,	Not properly labeled.
13919	Denatured alcohol,	Wachtel's Hardware Company, Boston, Mass.,	Not properly labeled.
13923	Denatured alcohol,	Washington Hardware Company, Boston, Mass.,	Not properly labeled.
13724	Denatured alcohol,	Carpenter Morton Company, Boston, Mass.,	Not properly labeled.
13920	Denatured alcohol,	C. M. Pray, Boston, Mass.,	Not properly labeled.
q 6414	Milk,	Amos P. Best, Dracut, Mass.,	Total solids, 10.36 per cent.; fat, 3.05 per cent.; contained added water.
q 6415			Total solids, 10.20 per cent.; fat, 3.00 per cent.; contained added water.
q 6416			Total solids, 10.10 per cent.; fat, 2.90 per cent.; contained added water.
q 6417			Total solids, 10.16 per cent.; fat, 2.90 per cent.; contained added water.
q 6418			Total solids, 10.20 per cent.; fat, 2.85 per cent.; contained added water.
q 6419			Total solids, 10.17 per cent.; fat, 2.90 per cent.; contained added water.
q 6420			Total solids, 9.92 per cent.; fat, 3.10 per cent.; contained added water.

LIST OF ADULTERATED OR IMPROPERLY LABELED FOODS, ETC. — *Concluded.*

Number of Sample.	Character of Sample.	Name of Manufacturer, Wholesaler or Producer.	Results of Analyses.
q 6430	Milk, ...	Walter Andrews, Dracut, Mass., ...	Total solids, 9.14 per cent.; fat, 2.80 per cent.; contained added water.
q 6431	Milk, ...	Walter Andrews, Dracut, Mass., ...	Total solids, 9.64 per cent.; fat, 3.00 per cent.; contained added water.
13900	Milk, ...	Domonick Sarcione, Lawrence, Mass., ...	Total solids, 11.10 per cent.; fat, 1.80 per cent.; proteid, 3.35 per cent.; skimmed milk.

INSPECTION OF DAIRIES.

During the month of February, 1911, 228 dairies were examined in the following places: —

Place.	Number examined.	Number found to present no Objectionable Features.	Per Cent.	Number concerning which Letters were sent.	Per Cent.
Bellingham,	27	10	37.04	17	62.96
Second inspection,	7	6	85.71	1	14.29
Berkley,	9	3	33.33	6	66.67
Second inspection,	9	6	66.67	3	33.33
Dighton,	5	3	60.00	2	40.00
Second inspection,	2	1	50.00	1	50.00
Third inspection,	1	–	–	1	100.00
Franklin,	14	8	57.14	6	42.86
Second inspection,	13	5	38.46	8	61.54
Millis,	2	1	50.00	1	50.00
Norfolk,	7	6	85.71	1	14.29
Second inspection,	1	1	100.00	–	–
Norton,	2	–	–	2	100.00
Raynham,	8	4	50.00	4	50.00
Second inspection,	15	10	66.67	5	33.33
Taunton,	28	14	50.00	14	50.00
Second inspection,	23	14	60.87	9	39.13
Wrentham,	3	3	100.00	–	–

Total number of dairies examined, ... 228
Number found to be free from objectionable conditions, ... 95
Number concerning which letters were sent, ... 81
Total number of conditions to which attention was called, ... 188
Percentage of dairies which passed inspection, ... 41.67

In addition to the above, 52 dairies were visited at which the sale of milk had been discontinued.

The names of the owners of the dairies found to be worthy of commendation follow: —

Bellingham.

Class B.

Arnold, Lewis
Bellingham Town Farm *
Brothers, Isaac
Brothers, Joseph
Bullard, O. L.*
Carrier, Alford
Connolly, M. *
Dawley, F. H. *
Metcalf, Samuel
Reardon, Eugene
Scott, Edgar
Scott, S. E.
Spear, J. *
Thayer, L. Francis * †
Webber, E. C.
White, Frank M.

Berkley.

Class B.

Allen, E. H. * †
Briggs, C. S. C. * †
Chase, E. A. *
Gracie, Joseph * †
Hopkins, Ernest
Howland, Joseph
McKay, J. H. * †
Swift, George
White, Mrs. Mary * †

* Second inspection. † Reported favorably on first inspection.

Dighton.

Class B.

Frances, G. E. * †
Horton, N. B.
Marble, C. C
Mello, Anton

Franklin.

Class A.

Ray, Joseph G.

Class B.

Allen, Milton
Bacon, A. O. * †
Boulanger, Edward
Gaskill, George N. *
Gates, Herbert * †
McIntosh, J. S.
Norfolk Woolen Co. *
Peck, Henry C.
Pond, H. W. *
Ribero, Frank
Sullivan, Dennis
Whiting, Chester

Millis.

Class B.

Horan, Thomas J.

Norfolk.

Class A.

Cook, T. D. & Co. * †

Class B.

Evans, Philip
Hamlin, W. E.
Jones, Andrew
McClintock, Levi
Norfolk Woolen Co.
Ware, Elmer

Raynham.

Class B.

Aruda, Manuel
Briel, A. W. *
Dupont, John
Goodwin, H. S. * †
Hall, C. F. * †
Hall, E. D. * †
Hall, L. L.
Hall, N. E. * †
King, Jesse * †
Laura, A. C. *
Leonard, E. F.
Lincoln, C. D. *
Mendes, J. H. *
Reid, James * †

Taunton.

Class B.

Briggs, W. E. *
Buckley, Timothy
Crapo, N.
Dean, Clarence
Field, Frank D. *
Field, Hiram *
Goff, James H. * †
Hallowell, B. F.
Jacento, Frank * †
King, Charles
Lincoln, A. B. *
Lincoln, J. W. *
Lincoln, R. F. *
Moxon, N. B. * †
Newman, Mrs. Mary * †
O'Neil, Daniel
Parker, John
Pierce, Clarence
Pierce, John
Rosa, Manuel
Sharpe, A. R.
Silvia, M. S. * †
Sousa, Frank
Sousa, John
Stone, F. J.
Thayer, Joel A.
Wade, John T. *
Williams, Roger * †

Wrentham.

Class B.

Grant, Walter
Hoggart, Samuel
Whipple, Arthur

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* Second inspection. † Reported favorably on first inspection.

WHY FOOD INTERESTS WANT "UNIFORMITY."[1]

By J. Q. Emery, Dairy and Food Commissioner of Wisconsin.

Uniformity of State food laws with the present national food law, with its special trade-protecting proclivities and provisions, is a slogan of the "trade" with which to thwart advanced food law enactments in States which regard the protection of the ultimate consumer against the harmful consequences of adulteration, fraud and deception in foods as being paramount to the promotion of the special interests of the trade. From the very nature of the conditions, the national food law, its jurisdiction being limited, so far as the States are concerned, to interstate commerce, relates directly to the trade, that is, to those who buy to sell again; whereas, State food laws have or should have for their object the protection of the ultimate consumer, the one who purchases for the purpose of consumption. The transactions of the trade are for profit; the transactions of the ultimate purchasers or consumers are to get the necessaries of life.

Laws to be effective must be adapted to the end sought, and to conditions. If conditions differ, laws to be effective must differ. Where great fundamental differences exist in conditions, they constitute inherent obstacles to uniformity. Conditions among the States are not widely different in relation to food law matters. In the States, food laws are based upon the police power. These laws in the States affect the consumers, the retailers of foods and wholesale dealers in intrastate trade, handling articles of food that, after being brought into the State, have become commingled with the property of the State, and hence are no longer subject to interstate regulations.

Generally, courts of the rank of justice of the peace are called upon to try, in the beginning, cases for violations of food laws in the States. These justices of the peace are not trained lawyers. They do not instruct the juries as to what the law in the case is. So it comes about that the juries practically determine what both the law and the facts are in those cases. That State food laws may be effectively enforced under these conditions requires that they be quite detailed and specific; that there be legal definitions and standards for the various terms concerning which controversy may arise. There being some similarity of conditions in these respects among the States, some measure of uniformity in food laws among the States seems practicable.

[1] Reprinted from "La Follette's Magazine," Dec. 17, 1910. The statements made in this article, though concerning conditions obtaining in the State of Wisconsin, are equally applicable to Massachusetts, where efforts are made each year to make our State laws uniform with those of the national government.

Food Adulterators wish to dictate Laws.

It has been demonstrated, however, that the producers of and dealers in foods do not desire uniformity of food laws, except that of their own dictation. In the fall of 1907, impelled by the complainings of food producers and dealers in foods that there was a lack of uniformity in label requirements, the commissioners and their chemists of the six States, Illinois, Iowa, Minnesota, North Dakota, South Dakota and Wisconsin, met in St. Paul, and formulated labels for various food products that would meet the requirements of the laws of all those States; and in the fall of 1908 formulated still others. Did the complaining food producers and dealers accept those uniform labels for their products? Far from it! They saw that in some of those States the food-law requirements were much weaker than in others, and they spurned with contempt the uniform labels that were offered them. When, two years ago, at the meeting of the Association of State and National Food and Dairy Departments at Mackinac, and one year ago at Denver, a proposition was brought forward for promoting uniform food laws among the *States,* the proposition was vehemently opposed by the organized food interests and their heelers.

It may be stated as a fundamental prineiple that the producers of and dealers in foods, who as a class (though not all individually) are responsible for adulterations now existing or that have existed, are not the parties who should dictate the food laws of a State for the protection of the consuming public. Those who alone would be amenable to proseeutions under a law are not proper persons to dictate its provisions.

Mere "Uniformity" not enough.

The present national food law is based, not on police power, but on the interstate commeree clause of the Constitution of the United States. Henee, a law needed by the States, and that may be valid when based upon the police power of the States, may be unconstitutional when based upon the interstate commeree clause of the United States Constitution.

The national food law concerns the manufacturers and wholesalers of food in interstate shipments under conditions differing widely from those under which retail business is carried on. Violations of the national food law, if tried at all, must be tried in the federal courts, the learned judges of which are able lawyers versed in the intrieacies of law. They determine the law in the ease. The jury determines only the facts. The federal judges are able to apply the broad and general provisions of the national food law to particular cases. They are able

to determine, from expert testimony, the standards that should govern the case. With such widely different conditions prevailing in the federal government and the States, it seems folly to argue that the same law would operate with equal effectiveness over all.

The theory or contention that the present national food law, with its imperfections, deficiencies, weaknesses and emasculation, by interpretation or otherwise, should be held up to the States as the embodiment of perfection; that it should be accepted by the States as the culmination of all wisdom and all efforts to secure laws that shall in fact as well as in pretense protect the consuming public against harmful adulterations, fraud and deceptions in food products; that the States should in food laws take no steps in advance of the present national law, make no improvement on it; that there should be no progress in these matters beyond the provisions of the present national law; that the States should adopt the shibboleth of mere uniformity; that the opinion of the United States Secretary of Agriculture, or that of the "three secretaries," rendered on an *ex parte* statement of the special food interests, can or should become the food law of the States — is preposterous, and is an example of the crafty methods of organized big food business, which ever proclaims its belief in the principles of food laws, but with bland artfulness and cunning ingenuity, seeks to circumvent their effective enactment into law.

Why they favor Federal Law.

In Wisconsin, and in many other States, the dairy and food commissioner is not given exclusive jurisdiction for the enforcement of the State dairy and food and drug laws, that is, for the prosecution of offenders against those laws. Any citizen of the State has the same right to lodge complaint with the court against violators of those laws as has the dairy and food commissioner. But such are not the facts of the case under the national food and drugs act of June 30, 1906, and the rules and regulations established for enforcing it. Under that act, and the rules and regulations established for enforcing it, and the mode of procedure therein prescribed, the individual citizen has no standing in the United States courts as prosecutor against food frauds, but is actually and effectively barred by that act from any right of direct redress in the federal courts. And this is one of the features of the national food law that is so dear and sacred to every manufacturer of and dealer in adulterated or fake foods. Exclusive jurisdiction is given by the terms of that act to the officers therein named for the enforcement of the act. Well may the producers and purveyors of adulterated and misbranded foods be pleased with this feature of the national food and drugs act, for in this provision there lurks the possibility of some powerful combi-

nation of food producers and vendors so to influence the interpretation or enforcement or nonenforcement of the national food and drugs act as to become a protection to them in the sale of adulterated or fake food products, rather than a protection to the consuming public against their practices. Well may they, with tongue against cheek and with sanctimonious mien, advocate a Procrustean uniformity of State food laws with the present weak national food law.

Another feature of the national food law which is dear to every manufacturer and purveyor of adulterated food — and a feature which has been the source of more deception than any other one cause — is the so-called guaranty clause. This is another feature which we are blandly asked to import into the State food laws for the exclusive benefit of the poor and downtrodden food-adulterating fraternity.

Other features of the national law embraced in the "uniformity" scheme which is urged upon us in season and out of season are those which treat offenders against the law with such tender regard as to let them off with a dollar fine, or, if they will come into court and promise to be good, they can at any time be released from further action by the payment of costs; and the further feature in the national misbranding law of such extreme weakness that the national authorities, according to current reports, fear to contest in the Supreme Court of the United States a case involving an alleged criminal action.

"Jokers."

It is because of these and other jokers in the national food law, which if copied into State food laws would give to the special food interests the advantage and the control of conditions, and which would correspondingly weaken the State's control of the special food interests, that the organized special food interests and their beneficiaries clamor so persistently for uniformity of State food laws with *the present national compromise food law.* Strike out those jokers from the present national food law and you remove the cause of the ravings of the organized special food interests for uniformity with the national law.

"If," says the United States Supreme Court, "there be any subject over which it would seem that the States ought to have plenary control and the power to legislate in respect to which it ought not to be supposed was intended to be surrendered to the general government, it is the protection of the people against fraud and deception in the sale of food products." *And this is the birthright of the States which they are asked to barter away for a mess of mere "uniformity" pottage.*

Let it never be forgotten that the strenuous appeal for "uniformity" on the part of the combination of special food interests, by which the

widespread adulteration of foods has been practiced, is not an appeal for the protection of the consumers against the harmful consequences of adulteration and deception in the manufacture and sale of food products, but is an appeal for their own gain. Left to their own greed, the protection they would give to the consumer is the protection the lion would give to the lamb. The right of the consuming public to protection is not to be subordinated to the clamor of the special food interests for mere "uniformity."

When the great national organizations of food producers and vendors shall be compelled to withdraw their paid lobbyists and lawyers from attempting to control food legislation; when there shall be no subsidizing of the press; when the money changers shall be scourged from the temple of justice, wherein should dwell all food law officials, national and State; when the rights of the consumer shall be the paramount object sought in food laws and their enforcement, — then the question of "uniformity" can be easily settled. . . .

PROGRESS IN PREVENTING THE SPREAD OF TUBERCULOSIS.

By Wm. W. Walcott, M.D., State Inspector of Health of South Middlesex County.

It is a recognized fact that in addition to the well-organized forces — State, local and private — for combating the spread of tuberculosis, there are organizations and individuals with excellent intention who, on account of misdirected zeal, may do positive harm by their superficial work. It is this type of worker, for example, who is responsible for such signs in street cars and elsewhere as "Tuberculosis can be cured," as well as articles in newspapers and magazines which contain illustrations and give examples of the number of cases of the disease which have been cured by a few months' stay at some sanatorium, by a brief rest in the country or by sleeping out of doors. Such information may, to a certain extent, be truthful, but is it the whole truth? The question is a complicated one, with many conditions to be considered.

As the factory is such an important part of the community, especially the industrial community, let us consider what questions arise when we are dealing with and trying to help a factory employee with a history of tuberculosis or with present indications of the disease. In the first place, his exact physical condition must be noted, then his home conditions, and both studied from a sanitary and educational point of view.

The possible influences of home conditions upon his health must be looked into, and proper instruction given to members of the household to prevent the spread of the disease. The next step is to make a careful study of the conditions under which the employee works; not only the general sanitary conditions, but special factory conditions, involving one or more processes in connection with the work accomplished, as, for example, the study of the effects of exposure to poisonous and irritating dusts and fumes. Then follows such practical measures as the protection of the fellow workers in particular and the public in general from infection.

When it comes to treatment, whether home treatment is decided upon or out-of-door camp life or sanatoria treatment is immaterial, as compared with the results of such treatment. The State, some years ago, asked the question: How can the State best provide competent medical supervision for patients with tuberculosis? The answer was: To provide for such patients State sanatoria. But what happens to a person who, before entering a sanatorium, worked in a factory under certain conditions — perhaps for a period of years? What advice is given him on leaving the sanatorium apparently cured? How can we best keep in touch with him, and note, if any, the first signs of recurrence of the disease? In other words, how can we, by keeping in touch with the patient longer and by preventing a recurrence of the disease, promote more effectively the public health? These questions deserve special consideration, for while it is true that one may recover from tuberculosis, it is also true that the disease leaves "scars;" and after an attack one is, as a rule, not so strong as before, and must guard himself or be guarded against untoward influences. This means frequently a complete change in the mode of life for the persons in question, a fact which apparently is frequently overlooked or does not receive sufficient consideration. In the zeal to help new patients recurrences of the disease among the old cases are more frequent than they would be if some of the work were done more thoroughly and the patients followed for a longer time. As the tuberculosis work is progressing at present, the State Inspectors of Health could doubtless take even a larger part in it than they have in the past, for they have become particularly well fitted to answer the questions that must be considered when dealing with tubercular operatives. In the first place, their knowledge of occupational hygiene in their own health districts assists them in determining the influence of factory conditions or industrial processes upon the health of any given individual. In the second place, the investigation of diseases, other than tuberculosis, dangerous to the public health in a com-

munity brings these physicians in touch not only with the persons in the factory, but, through the local health authorities, with those in the home. Finally, the co-operation of these physicians, under the direction of the State Board of Health, with the Trustees of Hospitals for Consumptives has given them experience of considerable value. If the inspectors could keep themselves informed concerning the occupation of the partially cured tubercular operatives, not only would such persons be better cared for and the results of a more or less prolonged sanatorium treatment be known, but greater protection would be given the other employees and the public at large.

In short, the State Inspectors of Health, by their knowledge of general health problems in the community, including the factory, the schoolhouse and the home, are in position not only to continue to co-operate with the forces doing efficient work in preventing the spread of tuberculosis, and to aid in the development of such work, but also to use their influence in such a way that only efficient work will be done.

EIGHTEEN CASES OF TUBERCULOSIS AMONG CHILDREN EMPLOYED IN TEXTILE FACTORIES.

By Wm. Hall Coon, M.D., State Inspector of Health of North Essex County.

Following are the facts concerning 18 children employed in textile establishments in my district who, on examination, were found to be ill with pulmonary tuberculosis: —

1. Male, fifteen years of age, "doffer." Sanitary conditions good. Found to live in a squalid tenement in the Italian quarter of the city. The family was finally prevailed upon to allow the boy to go into the country for some months. A decided improvement in his condition was noted later.

2. Female, fifteen years of age, repairs "harness" on loom. At work one year in department in which sanitary conditions were excellent. The girl then left her work and was placed under medical care. Assisted by the secretary of a local civic organization, she went into the country, and with proper care made marked improvement.

3. Female, sixteen years of age, "spinner." Worked under good sanitary conditions. Father died of tuberculosis. The girl was referred to Rutland, but refused to go. She left her work and placed herself under the care of a competent physician. Her health improved considerably under reasonably good home conditions.

4. Male, seventeen years of age, "storehouse helper." Worked under good sanitary conditions. The sanitary conditions in the home were good. The boy

was removed from inside work, placed in the care of a competent physician, and was later given light, outdoor work. His health improved rapidly.

5. Female, fourteen years of age, "mender." Worked under excellent sanitary conditions. Home conditions distinctly bad. Suspicion of tuberculosis in the family. The girl was sent to the day camp of an anti-tuberculosis society, where she remained for some time, leaving in good health.

6. Male, fifteen years of age, "roving tender." At work three years.— part of the time in England. Family very poor. Suspicion of tuberculosis in the family. The boy was sent to a day camp in Lawrence, where a noticeable improvement was made in his physical condition. He later took up out-of-door work.

7. Female, sixteen years of age, "spooler." Worked under good sanitary conditions. The sanitary conditions in the home were distinctly bad. Although the parents objected to her leaving work, provision was finally made for treatment at the day camp of an anti-tuberculosis society. As the result of treatment her health was materially improved.

8. Female, fourteen years of age, "hander-in." Worked under good sanitary conditions. The sanitary conditions in the home were distinctly bad. Suspicion of tuberculosis in the family. She was sent to a day camp, where she made an improvement in health.

9. Male, fourteen years of age, "filling tender." Worked under good sanitary conditions. The sanitary conditions in the home were bad. Suspicion of tuberculosis in the family. Large family crowded in a small tenement. The boy went to a day camp for treatment, and returned much improved in health.

10. Female, seventeen years of age, "filling." Worked under good sanitary conditions. Suspicion of tuberculosis in family. Home surroundings distinctly bad. The girl went to a day camp, where she improved in health.

11. Female, fifteen years of age, "filling tender." Worked under good sanitary conditions. The sanitary conditions in the home were poor. She went to a day camp, where she made a decided improvement in health. She was seen later working in another mill and appeared to be in good health.

12. Male, fifteen years of age, "combing cotton." Worked under good sanitary conditions. The sanitary conditions in the home were bad. He went to a day camp and improved in health.

13. Male, sixteen years of age, "doffer." Worked under good sanitary conditions. The home surroundings were moderately bad. He was advised to go to a day camp, but left work and was lost sight of.

Each of 5 other minors employed in a cotton mill and found to show signs of beginning tuberculosis gave the following history: 3 of the minors were fourteen years of age, 1 fifteen and 1 seventeen. All were employed in the process of spinning, under good sanitary conditions, while in each instance the sanitary home conditions were bad.

Of 18 minors found with symptoms or signs of tuberculosis, 13 were found doing some kind of work which was associated with the process

of spinning. The sanitary conditions in the homes of 12 of these 13 minors were found to be inferior to the sanitary conditions of the workrooms in which the minors were employed. The average age of the 18 minors was fifteen years and two months. There appeared to be no untoward influences associated with the employment of any of the minors found to have tubercuIosis.

As has been stated, one important factor influencing the health of the minors is the unhygienic home conditions. Another factor frequently lost sight of, is the danger of infection through the adult workers, a considerable proportion of whom, if not already diseased, are predisposed, by health, habit and home surroundings, to tuberculosis. An examination of the records of the Lawrence board of health shows few cases of tuberculosis reported among mill employees under the age of twenty-one years. Adult employees may continue at work in the mill until positive ill health causes them to seek medical advice. In the mean time they have been the foci of infection for young persons about them. The average adult employee of a textile mill is closely confined at his work. In the two major departments of the textile industry — weaving and spinning — where men, women and minors are employed, the close attention to detail is required of the adult, with the corresponding confinement to the loom or frame used, so that little opportunity is given for the adult employee to move far from the machine which he operates; while, on the other hand, the minors who perform unskilled work are not confined to any one locality, but are brought into contact with each other and with many adults. *Consequently, the average minor, through his wide range of activity in employment and closer contact with other employees, exposes himself more to infection from tuberculosis or some other communicable disease than a given adult in the same department. It is obvious, therefore, that in order to determine with any considerable degree of accuracy the prevalence of tuberculosis among employees in factories, State Inspectors of Health should be given the same authority to obtain information concerning the health of adults as the health of minors.* It is probable that a comparatively small proportion of cases of tuberculosis exists among minors, who, because of lack of information concerning the prevalence of this disease among adults, are unprotected from the real source of infection and possible disease. Following is a case to the point: an adult employed in a cotton mill was found putting cotton in hoppers in a machine preparatory to the process of carding. He was in an advanced stage of pulmonary tuberculosis and expectorated freely and promiscuously. It may be stated that the cotton handled by this man was later handled by many other employees. In the case in question the man was removed from the mill and the local board of

health was notified, so that proper precautions might be taken to prevent the spread of the disease, both within and without the factory. Doubtless, many similar conditions exist in our mills, as it is a fact that adult employees if in ill health will often conceal their state of health until actual disability causes them to give up their employment.

PREVALENCE OF TUBERCULOSIS AMONG CHILDREN EMPLOYED IN FACTORIES IN BERKSHIRE COUNTY.

By Lyman A. Jones, M.D., State Inspector of Health of Berkshire County.

In order that we may judge intelligently as to whether we are securing results in our work which are worth the effort and expense, it is important to pause now and then to consider the relative value of the work; in other words, to determine the percentage of results in comparison with the proportion of effort or expense which the work calls for. It is in this connection that I am outlining a study made with reference to the prevalence of tuberculosis in my locality.

As the result of making as careful an examination as circumstances permitted of some 3,000 persons under twenty-one years of age, I discovered only 2 or 3 who were actually ill with pulmonary tuberculosis. While it is probable that if certain of the minors had been examined under suitable conditions other cases of this disease would have been discovered, I have reason to believe that were such examinations made the number of cases found would be surprisingly small. To test, in a measure at least, the accuracy of such a belief, a study was made of all the deaths from pulmonary tuberculosis in North Adams and Adams, with special reference to age and occupation, so far as data were obtainable, for a period of ten years. In these two places the cotton industry, in which foreigners are largely employed, is well represented. During the ten years from 1900 to 1909, inclusive, there were recorded for the two communities mentioned 495 deaths from pulmonary tuberculosis. In 108 cases the deceased was under twenty-one years of age, while in 387 cases the age of the deceased was over twenty-one. One difficulty encountered at the outset was the lack of information in the returns as to the nature of occupation. In 129 cases the occupation was given with sufficient definiteness to show that the deceased was employed as an inside mill worker. Of this number, 22 were under and 107 were over twenty-one years of age. Of the 129 inside workers, 85 were said to be cotton mill employees, 15 of whom were under twenty-one years of age. In the cotton industry, therefore, on the basis referred

to, there were on an average but 17.6 per cent. deaths per year of minors from pulmonary tuberculosis, for North Adams and Adams. This discovery will in a measure tend to bear out the observation that there are but few minors with pulmonary tuberculosis employed in cotton mills in Berkshire County. It is probable that the small percentage given is more favorable than would be shown to be the case in some of the eastern industrial districts. Berkshire is high, the air is excellent, and its cities and towns, with the exception of a few limited areas, are not unduly crowded. Moreover, there are less uneducated foreigners here than in the more densely settled industrial sections. While these conditions undoubtedly exert a favorable influence, the results nevertheless point to the conclusion that the greater number of cases of tuberculosis are among adults; hence it follows that the greater problem in dealing with the prevalence of tuberculosis in factories is to control the disease among the adults, and thus to prevent the spread of infection to healthy adults and to minors. The question, therefore, becomes one of proportionate effort and returns. The law should make it possible to inquire into the health of the adult employees, and until this step is taken the full gain and benefit of the examination of minors, so far as it relates to the prevention of the spread of tuberculosis at least, cannot be secured.

In interviewing and examining minors it is a matter of frequent occurrence to meet children in the cotton mills who are small and undersized. These children generally show no evidence of disease at the time of the examination, although one naturally questions as to whether some of them are likely to develop tuberculosis at a later period. An attempt, therefore, was made to gain some information which might show whether this lack of growth or development was due to the conditions under which the minors were employed, or whether it was due to outside conditions. To this end a special study was made in three cotton mills, where 889 minors were employed. Of this number, 326 (148 males and 178 females) were under sixteen years of age, 100 of whom (60 males and 40 females) were undersized and under weight. The largest proportion of these minors were employed in the spinning, weaving and carding rooms. The fact that the children had been at work for a length of time not exceeding two years, and that 67 of the 100 who were observed to be undersized and under weight had been employed less than one year, made it appear to be reasonably conclusive that the abnormal weight and size were not due to the conditions of employment. Moreover, the mills in question were modern in construction and well appointed from a sanitary point of view. That outside conditions, including home management, were much more responsible for the lack of growth seemed evident. Such conditions as crowded rooms, improper food and irregular

habits appeared to offer relatively much greater opportunity for fostering disease than the time spent in the well-appointed modern factories. In this connection the question of nationality was also interesting, for more than half of the 100 minors were of foreign parentage, a large proportion of whom were of smaller stature than the Anglo-Saxon people.

Thus the influence of home and outside conditions upon the health of persons who are employed in factories emphasizes the fact that health inspection work, whether in the factory or in the home, in order to promote effectively public health, must be done under the guidance of the central health authority of the State. The problem of preserving the health of factory employees cannot be successfully solved without striving to improve all the factors or conditions in the community which may affect it.

THE SANITARY CONDITIONS OF TENEMENT HOUSE WORK-ROOMS IN SUFFOLK COUNTY, AND THEIR IMPORTANT RELATION TO THE PUBLIC HEALTH.

By H. Linenthal, M.D., State Inspector of Health of Suffolk County.

The laws of the Commonwealth provide that —

A room or apartment in a tenement or dwelling house shall not be used for the purpose of making, altering, repairing or finishing therein coats, vests, trousers or wearing apparel of any description, except by the members of the family dwelling therein; and a family which desires to make, alter, repair or finish coats, vests, trousers or wearing apparel of any description in a room or apartment in a tenement or dwelling house shall first procure a license therefor from a state inspector of health, which shall be approved by the state board of health.

When an application for a license is made to the State Inspector of Health the premises are inspected to determine the number of rooms occupied by the family, the number of inmates and the sanitary conditions, such as the cleanliness of the rooms, especially of the room where the work is to be done. Inquiries are made as to the condition of the health of the inmates, the existence of any contagious skin disease among the members of the family and the existence of communicable disease in the family applying for the license or in any other family in the building. If all the conditions are satisfactory a license is issued. The holder of the license is instructed that good sanitary conditions must be maintained in the home and that the license must be promptly re-

turned to the State Inspector of Health should any contagious disease occur in the family or among any of the occupants of the building. Since most of the workers in the congested tenement district are Italians, a circular printed in Italian is issued with the license. The circular reads as follows: —

1. The apartments, stairs and hallways must be kept in a cleanly condition at all times.
2. The rooms must be well aired. The windows of the living rooms as well as of the sleeping rooms should be partly open at all times.
3. The sewing should be done in the room designated by the State Inspector of Health and in no other room.
4. During the process of finishing, the garments should not be placed in any room that is used as a sleeping apartment.
5. Immediate notice should be sent to the State Inspector of Health in case of occurrence of a communicable disease in the family of the person holding the license, or in any family in the same building. Any case of skin disease in the family of the person holding the license should also be reported to the State Inspector of Health.
6. In case of removal, immediate notice must be sent to the State Inspector of Health.
7. The work on wearing apparel must be done on the premises designated on the license, and only by the members of the family of the person holding such license.
8. The number of occupants of the apartment should not exceed the number specified by the State Inspector of Health.
9. The license may be revoked on violation of any of the above regulations.

If the premises are found to be unclean, if there is overcrowding, if any communicable disease is detected in any member of the family, or if any evidence is found of contagious skin disease, the license is refused.

When a license is issued, a record of it containing a detailed description of the premises and of the number of inmates is filed in the office of the State Inspector of Health. This record is referred to on subsequent inspections. In addition to such records a carefully registered street index is kept, so that the number of workrooms in any street or in any building in the district can be had on reference.

The local boards of health submit to the State Inspector of Health daily reports of the occurrence of communicable diseases in their respective cities. These lists are examined daily and checked off from the street index of the tenement workrooms, so that the occurrence of communicable disease in a workroom is immediately discovered. If any such disease is reported from a family holding a license to work on wearing apparel, or from any family in the building where a license is held, the

premises are visited at once, and, if necessary, the license is revoked. In case it is found that the articles on which work is done are exposed to infectious material the local board of health is notified to take such action as the public safety may require.

There are at present about 1,600 licensed tenement workrooms in the district. This number is continually changing. Many of the holders of licenses move frequently, and new licenses have to be issued for the new premises. Since my appointment as State Inspector of Health about 4,000 licenses have been issued and about 7,000 inspections made. Over 200 cases of communicable diseases have been investigated and the necessary steps taken to prevent the spread of disease from these workrooms.

Some of the workrooms in the district are in homes where the sanitary conditions are beyond reproach. The work of crocheting on ladies' undervests is done by women who have comfortable homes, for a pastime or for a little additional "pin money." The occurrence of communicable disease in these homes is the only danger to the public health, and precautions are taken against such occurrence by the methods indicated above.

A great many of the workrooms, however, are located in the congested tenement district. The work is done in the kitchen, which is also used as a dining room and living room. In these workrooms one is apt to find conditions of overcrowding; dark, poorly ventilated halls; unclean water-closets; bedrooms with windows opening into narrow, dirty alleys, into air shafts or having no windows at all. In the evening, when all the inmates come together, these kitchen workrooms are overcrowded, and the finished garments may be taken into the bedrooms and placed upon the beds which are often unclean. To maintain sanitary conditions in these workrooms compatible with public health, frequent inspection is essential. Subsequent inspections may reveal conditions of uncleanliness and overcrowding which did not exist at the time the license was issued.

From the above brief outline of the conditions, methods of inspection and licensing of tenement workrooms, it is clear that the problem is pre-eminently and exclusively one of public health. To quote the statute, —

> Every room or apartment in which garments or articles of wearing apparel are made, altered, repaired or finished shall be kept in a cleanly condition and shall be subject to the inspection and examination of the state inspectors of health *for the purpose of ascertaining whether said room or apartment or articles of wearing apparel or any parts thereof are clean and free from vermin and from infectious or contagious matter.*

Unlike workers in factories and workshops the tenement workers cannot be subjected to restrictive legislation as to hours of work, employment of minors, etc. The employment of minors, in fact, is very rare in the district; in upwards of 7,000 inspections only 7 minors were observed helping with the sewing after school hours. In general, the older children take care of the younger ones while the mother does the sewing.

While the primary object of inspection of tenement workrooms is to guard the public health from the spread of contagious diseases by means of infected wearing apparel, it accomplishes a great deal more by the maintenance of high sanitary standards in these congested tenement homes. The friendly visits to these homes and close personal contact with the workers have been a great educational force in the development of higher standards of hygienic living. This fact becomes evident by comparing the conditions in the licensed flats with those that prevail in other flats of the same building, where no licenses are held. The difference in the sanitary conditions in these two classes of homes is often very striking.

To make our present law more effective, other industries carried on in the homes, such as the manufacture of paper boxes, artificial flowers, base balls, cigars and cigarettes, tooth brushes, etc., should be included in the provisions of the law regulating tenement workrooms. For there is surely danger of disseminating infection by means of these articles as well as by means of wearing apparel.

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WEEKLY RETURNS OF DEATHS FROM CITIES AND TOWNS OF MORE THAN 10,000 POPULATION.

WEEK ENDING MARCH 4, 1911.

CITIES AND TOWNS.	Population. Census for 1910	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM—					
				Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diphtheria.	Typhoid Fever	Measles.
Boston,	670,585	220	60	87	39	22	5	2	1
Worcester,	145,986	45	11	21	10	3	2	–	–
Fall River,	119,295	31	14	14	7	3	–	–	1
Lowell,	106,294	34	6	12	8	1	–	–	–
Cambridge,	104,839	38	8	18	8	8	1	–	–
New Bedford,	96,652	42	15	13	9	3	–	–	–
Lynn,	89,336	30	8	5	2	1	1	1	–
Springfield,	88,926	31	6	10	9	–	–	1	–
Lawrence,	85,892	34	18	15	8	3	1	–	–
Somerville,	77,236	26	4	9	5	1	2	–	–
Holyoke,	57,730	21	9	8	7	1	–	–	–
Brockton,	56,878	15	1	8	6	1	–	–	–
Malden,	44,404	4	–	1	1	–	–	–	–
Haverhill,	44,115	25	5	9	4	4	–	–	–
Salem,	43,697	17	–	6	1	4	–	–	–
Newton,	39,806	17	5	2	–	1	–	–	–
Fitchburg,	37,826	13	6	5	5	–	–	–	–
Taunton,	34,259	11	3	6	3	2	–	–	–
Everett,	33,484	7	1	1	1	–	–	–	–
Quincy,	32,642	9	4	4	1	–	–	–	–
Chelsea,	32,452	16	2	6	3	1	1	–	–
Pittsfield,	32,121	8	1	1	1	–	–	–	–
Waltham,	27,834	6	0	3	2	–	–	–	–
Brookline,	27,792	5	1	1	1	–	–	–	–
Chicopee,	25,401	9	4	5	2	2	1	–	–
Gloucester,	24,398	14	2	1	–	1	–	–	–
Medford,	23,150	3	–	1	1	–	–	–	–
North Adams,	22,019	7	1	4	1	2	–	–	–
Northampton,	19,431	10	1	3	1	–	1	–	–
Beverly,	18,650	5	–	3	3	–	–	–	–
Revere,	18,219	7	1	3	–	1	–	–	–
Leominster,	17,580	5	1	3	3	–	–	–	–
Attleborough,	16,215	3	0	1	1	–	–	–	–
Westfield,	16,044	7	–	2	–	2	–	–	–
Peabody,	15,721	–	–	–	–	–	–	–	–
Melrose,	15,715	5	0	–	–	–	–	–	–
Hyde Park,	15,507	1	0	1	1	–	–	–	–
Woburn,	15,308	0	–	–	–	–	–	–	–
Newburyport,	14,949	5	–	–	–	–	–	–	–
Gardner,	14,699	3	0	–	–	–	–	–	–
Marlborough,	14,579	2	0	–	–	–	–	–	–
Clinton,	13,075	3	–	1	–	1	–	–	–
Milford,	13,055	4	1	3	3	–	–	–	–
Adams,	13,026	1	–	–	–	–	–	–	–
Framingham,	12,948	3	1	–	–	–	–	–	–
Weymouth,	12,895	2	–	–	–	–	–	–	–
Watertown,	12,875	4	2	2	1	1	–	–	–
Southbridge,	12,592	2	–	1	–	–	–	1	–
Plymouth,	12,141	–	–	–	–	–	–	–	–
Webster,	11,509	2	1	1	1	–	–	–	–
Methuen,	11,448	4	–	1	1	–	–	–	–
Wakefield,	11,404	3	1	1	1	–	–	–	–
Arlington,	11,187	1	–	–	–	–	–	–	–
Greenfield,	10,427	0	–	–	–	–	–	–	–
Winthrop,	10,132	0	–	–	–	–	–	–	–
Recapitulation.									
Total of reporting towns,	2,578,518	820	204	303	163	69	15	5	2

WEEK ENDING MARCH 11, 1911.

CITIES AND TOWNS.	Population. Census for 1910.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —					
				Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	670,585	249	72	95	38	19	6	–	–
Worcester,	145,986	44	9	16	7	6	–	–	1
Fall River,	119,295	41	15	21	9	2	1	1	–
Lowell,	106,294	47	11	21	13	5	1	–	–
Cambridge,	104,839	36	1	20	10	8	–	–	–
New Bedford,	96,652	47	9	16	8	5	1	–	–
Lynn,	89,336	23	5	5	2	2	–	–	–
Springfield,	88,926	29	4	10	5	3	–	–	–
Lawrence,	85,892	33	12	17	9	3	2	–	–
Somerville,	77,236	15	7	6	3	1	–	–	–
Holyoke,	57,730	20	11	7	3	3	–	–	–
Brockton,	56,878	24	6	8	6	2	–	–	–
Malden,	44,404	10	2	4	1	1	1	–	–
Haverhill,	44,115	13	2	5	1	1	–	–	–
Salem,	43,697	5	3	1	–	–	–	–	–
Newton,	39,806	8	1	–	–	–	–	–	–
Fitchburg,	37,826	10	5	4	1	–	2	–	–
Taunton,	34,259	16	5	5	2	1	–	–	–
Everett,	33,484	12	2	2	2	–	–	–	–
Quincy,	32,642	11	4	1	–	–	–	–	–
Chelsea,	32,452	11	1	3	3	–	–	–	–
Pittsfield,	32,121	14	6	2	1	1	–	–	–
Waltham,	27,834	9	3	4	3	–	–	–	–
Brookline,	27,792	11	–	2	1	–	–	–	–
Chicopee,	25,401	6	3	1	1	–	–	–	–
Gloucester,	24,398	9	3	2	–	2	–	–	–
Medford,	23,150	4	1	1	1	–	–	–	–
North Adams,	22,019	4	2	1	–	1	–	–	–
Northampton,	19,431	12	5	3	–	2	–	1	–
Beverly,	18,650	6	–	1	–	1	–	–	–
Revere,	18,219	1	–	–	–	–	–	–	–
Leominster,	17,580	3	–	–	–	–	–	–	–
Attleborough,	16,215	7	2	1	–	–	–	–	–
Westfield,	16,044	9	–	2	–	2	–	–	–
Peabody,	15,721	–	–	–	–	–	–	–	–
Melrose,	15,715	4	1	2	1	–	–	–	–
Hyde Park,	15,507	8	2	2	–	1	–	–	–
Woburn,	15,308	5	0	2	2	–	–	–	–
Newburyport,	14,949	3	1	–	–	–	–	–	–
Gardner,	14,699	2	–	–	–	–	–	–	–
Marlborough,	14,579	4	1	1	–	1	–	–	–
Clinton,	13,075	2	–	–	–	–	–	–	–
Milford,	13,055	5	0	1	1	–	–	–	–
Adams,	13,026	7	4	–	–	–	–	–	–
Framingham,	12,948	2	0	1	1	–	–	–	–
Weymouth,	12,895	8	–	–	–	–	–	–	–
Watertown,	12,875	1	0	1	1	–	–	–	–
Southbridge,	12,592	0	–	–	–	–	–	–	–
Plymouth,	12,141	–	–	–	–	–	–	–	–
Webster,	11,509	0	–	–	–	–	–	–	–
Methuen,	11,448	2	–	–	–	–	–	–	–
Wakefield,	11,404	5	–	1	–	1	–	–	–
Arlington,	11,187	3	1	1	–	1	–	–	–
Greenfield,	10,427	3	1	–	–	–	–	–	–
Winthrop,	10,132	0	–	–	–	–	–	–	–
Recapitulation.									
Total of reporting towns,	2,578,518	863	223	299	136	75	14	2	1

WEEK ENDING MARCH 18, 1911.

CITIES AND TOWNS.	Population. Census for 1910.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM—					
				Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	670,585	275	70	100	40	29	2	–	1
Worcester,	145,986	59	16	17	11	3	–	–	1
Fall River,	119,295	57	20	30	9	10	1	–	3
Lowell,	106,294	31	12	13	7	1	2	–	–
Cambridge,	104,839	32	4	13	6	2	–	1	–
New Bedford,	96,652	42	15	14	10	1	–	–	–
Lynn,	89,336	25	4	7	3	4	–	–	–
Springfield,	88,926	29	8	10	3	1	1	1	–
Lawrence,	85,892	23	8	5	–	2	–	–	1
Somerville,	77,236	26	11	10	6	1	–	–	–
Holyoke,	57,730	17	4	8	5	2	–	–	–
Brockton,	56,878	15	6	6	2	1	–	–	–
Malden,	44,404	16	4	4	3	–	1	–	–
Haverhill,	44,115	16	2	11	4	–	–	–	–
Salem,	43,697	16	5	8	3	3	1	–	–
Newton,	39,806	11	1	4	4	–	–	–	–
Fitchburg,	37,826	9	2	2	1	1	–	–	–
Taunton,	34,259	12	2	7	5	–	–	–	–
Everett,	33,484	5	1	3	1	2	–	–	–
Quincy,	32,642	8	2	1	1	–	–	–	–
Chelsea,	32,452	13	2	3	2	–	–	–	–
Pittsfield,	32,121	8	1	4	2	1	–	–	–
Waltham,	27,834	12	0	4	3	–	–	–	–
Brookline,	27,792	9	1	1	–	1	–	–	–
Chicopee,	25,401	7	2	4	2	2	–	–	–
Gloucester,	24,398	10	2	1	–	1	–	–	–
Medford,	23,150	8	1	3	2	1	–	–	–
North Adams,	22,019	6	4	2	–	1	–	–	–
Northampton,	19,431	13	1	3	1	–	–	–	–
Beverly,	18,650	6	1	–	–	–	–	–	–
Revere,	18,219	2	–	–	–	–	–	–	–
Leominster,	17,580	2	–	1	1	–	–	–	–
Attleborough,	16,215	3	1	–	–	–	–	–	–
Westfield,	16,044	8	3	–	–	–	–	–	–
Peabody,	15,721	–	–	–	–	–	–	–	–
Melrose,	15,715	4	1	1	1	–	–	–	–
Hyde Park,	15,507	4	1	1	1	–	–	–	–
Woburn,	15,308	5	1	3	1	1	1	–	–
Newburyport,	14,949	4	–	1	–	1	–	–	–
Gardner,	14,699	5	1	1	–	–	–	–	–
Marlborough,	14,579	5	2	–	–	–	–	–	–
Clinton,	13,075	2	1	–	–	–	–	–	–
Milford,	13,055	–	–	–	–	–	–	–	–
Adams,	13,026	0	–	–	–	–	–	–	–
Framingham,	12,948	4	1	1	–	1	–	–	–
Weymouth,	12,895	5	–	–	–	–	–	–	–
Watertown,	12,875	3	0	–	–	–	–	–	–
Southbridge,	12,592	4	0	1	–	1	–	–	–
Plymouth,	12,141	–	–	–	–	–	–	–	–
Webster,	11,509	2	2	1	1	–	–	–	–
Methuen,	11,448	–	–	–	–	–	–	–	–
Wakefield,	11,404	1	–	–	–	–	–	–	–
Arlington,	11,187	2	–	1	1	–	–	–	–
Greenfield,	10,427	6	–	1	1	–	–	–	–
Winthrop,	10,132	0	–	–	–	–	–	–	–
Recapitulation.									
Total of reporting towns,	2,554,025	887	226	311	143	74	9	2	6

WEEK ENDING MARCH 25, 1911.

CITIES AND TOWNS.	Population Census for 1910	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM — Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	670,585	272	71	94	32	24	3	3	–
Worcester,	145,986	48	12	14	9	4	–	–	1
Fall River,	119,295	58	–	34	22	3	–	–	5
Lowell,	106,294	43	16	15	13	1	–	–	–
Cambridge,	104,839	37	11	14	6	3	–	–	1
New Bedford,	96,652	32	9	14	7	4	–	–	1
Lynn,	89,336	30	8	9	5	3	–	–	–
Springfield,	88,926	35	6	9	4	3	–	–	–
Lawrence,	85,892	21	8	9	5	1	–	–	1
Somerville,	77,236	25	3	11	7	–	1	–	–
Holyoke,	57,730	19	7	8	4	2	2	–	–
Brockton,	56,878	12	3	4	3	–	–	–	–
Malden,	44,404	18	3	7	3	1	2	–	–
Haverhill,	44,115	6	1	1	1	–	–	–	–
Salem,	43,697	13	2	5	2	1	–	–	–
Newton,	39,806	7	1	1	1	–	–	–	–
Fitchburg,	37,826	6	2	3	2	–	–	–	–
Taunton,	34,259	14	5	7	4	2	–	–	–
Everett,	33,484	8	1	1	–	1	–	–	–
Quincy,	32,642	10	2	5	5	–	–	–	–
Chelsea,	32,452	9	2	–	–	–	–	–	–
Pittsfield,	32,121	8	–	2	2	–	–	–	–
Waltham,	27,834	11	3	4	2	2	–	–	–
Brookline,	27,792	12	–	1	1	–	–	–	–
Chicopee,	25,401	5	1	4	2	2	–	–	–
Gloucester,	24,398	4	–	–	–	–	–	–	–
Medford,	23,150	6	–	1	1	–	–	–	–
North Adams,	22,019	10	7	3	2	1	–	–	–
Northampton,	19,431	8	1	5	2	2	–	–	–
Beverly,	18,650	5	1	2	1	1	–	–	–
Revere,	18,219	3	–	–	–	–	–	–	–
Leominster,	17,580	4	–	3	2	–	–	–	–
Attleborough,	16,215	8	2	5	2	2	–	–	–
Westfield,	16,044	7	–	4	1	3	–	–	–
Peabody,	15,721	–	–	–	–	–	–	–	–
Melrose,	15,715	1	0	–	–	–	–	–	–
Hyde Park,	15,507	2	0	–	–	–	–	–	–
Woburn,	15,308	2	0	–	–	–	–	–	–
Newburyport,	14,949	6	–	4	2	1	–	–	–
Gardner,	14,699	5	2	1	–	–	1	–	–
Marlborough,	14,579	5	2	3	2	–	–	–	–
Clinton,	13,075	3	1	1	1	–	–	–	–
Milford,	13,055	–	–	–	–	–	–	–	–
Adams,	13,026	8	3	1	–	1	–	–	–
Framingham,	12,948	5	1	1	1	–	–	–	–
Weymouth,	12,895	–	–	–	–	–	–	–	–
Watertown,	12,875	6	1	1	–	–	–	–	–
Southbridge,	12,592	3	1	2	2	–	–	–	–
Plymouth,	12,141	–	–	–	–	–	–	–	–
Webster,	11,509	4	1	1	1	–	–	–	–
Methuen,	11,448	–	–	–	–	–	–	–	–
Wakefield,	11,404	5	–	–	–	–	–	–	–
Arlington,	11,187	3	1	2	2	–	–	–	–
Greenfield,	10,427	–	–	–	–	–	–	–	–
Winthrop,	10,132	1	–	1	–	–	1	–	–

Recapitulation.

Total of reporting towns,	2,530,703	873	201	317	164	68	10	3	9

WEEKLY RETURNS OF DEATHS FROM CERTAIN INFECTIOUS DISEASES.

DEATHS FROM INFECTIOUS DISEASES NOT SPECIFICALLY MENTIONED IN ABOVE TABLES DURING THE WEEKS OF MARCH 4, 11, 18 AND 25, 1911.

DISEASE.	Place.	WEEK ENDING—			
		Mar. 4.	Mar. 11.	Mar. 18	Mar. 25.
Cerebro-spinal meningitis,	Boston,	-	-	1	2
	Lowell,	-	-	1	-
	Northampton,	-	-	1	-
	North Adams,	1	-	-	-
	Salem,	-	-	-	1
	Worcester,	2	-	-	-
Scarlet fever,	Attleborough,	-	1	-	-
	Boston,	4	6	6	3
	Cambridge,	-	1	1	-
	Haverhill,	-	1	-	-
	Lynn,	-	-	-	1
	Quincy,	1	-	-	-
	Salem,	1	1	-	-
	Somerville,	-	-	-	2
	Worcester,	-	-	2	-
Whooping cough,	Boston,	5	3	4	1
	Fall River,	1	1	1	1
	Fitchburg,	-	1	-	1
	Hyde Park,	-	1	-	-
	Lawrence,	1	-	-	-
	Lowell,	2	-	-	-
	Lynn,	-	1	-	-
	New Bedford,	-	1	-	-
	Northampton,	-	-	-	1
	Quincy,	1	-	-	-
	Salem,	-	-	1	-
	Springfield,	-	1	1	-
Erysipelas,	Boston,	1	8	-	3
	Cambridge,	-	1	1	-
	Chelsea,	-	-	1	-
	Haverhill,	1	-	2	-
	Marlborough,	-	-	-	1
	Quincy,	-	1	-	-
	Somerville,	-	-	1	-
	Taunton,	-	-	1	-
	Waltham,	-	-	1	-

DEATHS FROM INFECTIOUS DISEASES, ETC. — *Concluded.*

DISEASE.	Place.	WEEK ENDING — Mar. 4.	Mar. 11.	Mar. 18.	Mar. 25.
Tuberculosis other than pulmonary.	Boston,	2	6	3	6
	Brockton,	–	–	–	1
	Brookline,	–	1	–	–
	Cambridge,	–	–	1	1
	Chelsea,	1	–	–	–
	Fall River,	–	1	–	–
	Gardner,	–	–	1	–
	Haverhill,	–	1	5	–
	Holyoke,	–	1	1	–
	Lawrence,	–	1	–	1
	Lowell,	–	1	–	1
	Malden,	–	1	–	–
	New Bedford,	–	–	1	–
	Newton,	1	–	–	–
	Pittsfield,	–	–	1	–
	Salem,	–	–	–	1
	Somerville,	–	–	1	–
	Springfield,	–	1	1	1
	Waltham,	–	1	–	–
	Worcester,	4	2	–	–
Influenza,	Boston,	4	2	3	2
	Brockton,	1	–	2	–
	Cambridge,	1	–	–	1
	Haverhill,	–	1	–	–
	Lowell,	–	–	2	–
	New Bedford,	–	–	1	–
	Northampton,	–	–	1	–
	Somerville,	–	–	1	1
	Springfield,	–	–	2	–
	Taunton,	1	–	1	–
	Waltham,	1	–	–	–
Meningitis other than cerebro-spinal.	Brockton,	–	–	1	–
	Wakefield,	1	–	–	–
	Watertown,	–	–	–	1
Anterior poliomyelitis,	Lowell,	–	1	–	–

WEEKLY RETURNS OF CASES OF INFECTIOUS DISEASES.

Cases of Infectious Diseases reported during the Weeks of Mar. 4, 11, 18 and 25, 1911.

[Under the provisions of section 52 of chapter 75 of the Revised Laws.]

	Week ending —				
	Mar. 4.	Mar. 11.	Mar. 18.	Mar. 25.	Total.
Diphtheria,	146	118	129	121	514
Measles,	375	325	453	586	1,739
Scarlet fever,	167	158	159	169	653
Typhoid fever,	23	21	30	25	99
Tuberculosis, pulmonary,	117	179	165	162	623
Tuberculosis other than pulmonary,	–	11	1	3	15
Cerebro-spinal meningitis,	2	8	4	4	18
Meningitis other than cerebro-spinal,	–	2	2	1	5
Whooping cough,	84	110	108	128	430
Varicella,	53	66	61	64	244
Ophthalmia neonatorum,	30	30	34	34	128
Anterior poliomyelitis,	–	2	3	1	6
Mumps,[1]	16	17	16	14	63
Erysipelas,[1]	–	–	–	1	1
Trachoma,	1	1	1	1	4
Tetanus,	1	3	–	–	4
Actinomycosis,	2	–	–	–	2

[1] Erysipelas and mumps are not diseases notifiable under section 52 of chapter 75 of the Revised Laws. The figures concerning these diseases are, therefore, incomplete.

MONTHLY REPORT ON INSPECTION OF FOOD AND DRUGS

The following summary presents the results of the examination of food and drugs made by the State Board of Health during the month of March, 1911:—

Articles examined.	Number found to be of Good Quality.	Number adulterated or varying from the Legal Standard.	Total.	Articles examined.	Number found to be of Good Quality.	Number adulterated or varying from the Legal Standard.	Total.
Butter,	2	–	2	Lard,	14	1	15
Canned fruit,	2	–	2	Maple sugar,	2	1	3
Cereal,	1	–	1	Maple syrup,	3	1	4
Cheese,	1	–	1	Meat products:—			
Cocoa,	1	–	1	Mince meat,	1	–	1
Condensed milk,	4	–	4	Pressed meat,	1	–	1
Confectionery,	12	8	20	Sausages,	16	19	35
Cream,	4	–	4	Tongue,	1	–	1
Cream of tartar,	3	–	3	Tripe,	5	–	5
Drugs,	59	13	72	Milk,	253	75	328
Flavoring extracts:—				Non-alcoholic drink,	1	–	1
Lemon,	3	1	4	Olive oil,	1	1	2
Peppermint,	4	1	5	Oysters,	5	–	5
Vanilla,	4	–	4	Peanut butter,	1	–	1
Wintergreen,	2	–	2	Pickles,	16	–	16
Honey,	3	–	3	Spice,	5	–	5
Jams, jellies and preserves,	5	5	10	Total,	435	126	561

The samples of drugs found to be adulterated were: camphor liniment, spirit of peppermint and elixir potassium bromide.

The cities and towns in which samples were collected were: Belmont, Boston, Brockton, Cambridge, Fitchburg, Lawrence, Leominster, Lowell, Lynn, Mansfield, Marlborough, Methuen, New Bedford, Newton, North Brookfield, Northampton, Norwood, Pittsfield, Plymouth, Princeton, Quincy, Salem, Somerville, Springfield and South Framingham.

PROSECUTIONS FOR VIOLATIONS OF THE LAW RELATING TO FOOD AND DRUGS.

Twenty-eight convictions were secured during the month of March, 1911, for selling adulterated food and drugs as follows: —

No.	Name of Defendant.	Place.	Character of Article sold.
1	Harold S. Brown,	Boston,	Alcohol (denatured).[1]
2	Michael T. Doyle,	Lawrence,	Alcohol (denatured).[1]
3	Walter J. Keating,	Lawrence,	Alcohol (denatured).[1]
4	Hyman J. Levy,	Boston,	Alcohol (wood).
5	Ray W. Maxwell,	Boston,	Alcohol (denatured).[1]
6	Leroy B. Philbrick,	Salem,	Alcohol (denatured).[1]
7	Benj. W. Watchell,	Boston,	Alcohol (denatured).[1]
8	Rosana A. Garwin,	Lawrence,	Aniseed syrup.[2]
9	Joseph Silverman,	Lawrence,	Lard (compound not marked).
10	Charles Cunio,	Lawrence,	Maple sugar (30 per cent cane sugar).
11	Walter Andrews,	Dracut,	Milk (total solids, 9.92).[3]
12	Walter Andrews,	Dracut,	Milk (total solids, 9.64).[3]
13	Amos P. Best,	Dracut,	Milk (total solids, 9.92).[3]
14	James M. Nowland,	Quincy,	Milk (total solids, 11.30).[3]
15	Chas. Simonian,	Methuen,	Milk (total solids)
16	Gaspar Petrongelie,	Quincy,	Milk (total solids, 11.35).[3]
17	Irving Proctor,	Princeton,	Milk (total solids, 8.40).[3]
18	Alefew Zappla,	Lawrence,	Milk (total solids, 10.09).[3]
19	William H. Harris,	Lawrence,	Sausages.[4]
20	Herbert Marshall,	Lawrence,	Sausages.[4]
21	Peter Reeves,	Lawrence,	Sausages.[4]
22	Merton T. Rogers,	Lawrence,	Sausages.[4]
23	Lustian L. Schapp,	Boston,	Sausages.[4]
24	Henry Siegal Co.,	Boston,	Sausages.[4]
25	James Tansy,	Boston,	Sausages.[4]
26	Gustien Yunggerbauer,	Lawrence,	Sausages.[4]
27	Harry Phipps,	South Framingham,	Tripe (contained a preservative).
28	John J. Trainor,	Boston,	Yeast.[4]

[1] Not properly labeled.
[2] Contained morphine in excess of amount stated on label.
[3] Watered.
[4] Contained cereal.

Fines imposed, $870.

Number of Sample.	Character of Sample.	Name of Manufacturer, Wholesaler or Producer.	Results of Analyses.
14051	Lemon extract,	Hall Extract Company, Portland, Me.,	Low in lemon oil; 0.6 per cent. lemon oil.
6923 B	Peppermint extract,	Varsity Extract Company, Lynn, Mass.,	Low in peppermint oil; 1.5 per cent. peppermint oil.
14072	Elixir potassium bromide,	Hall & Lyon Company, Lowell, Mass.,	Low in potassium bromide: 30.8 per cent. national formulary standard.
14145	Camphor liniment,	Frederick L. Pratt, Boston, Mass.,	Low in camphor, 66 per cent.; U. S. Pharmacopœial standard.
q 6551	Milk	Irving Proctor, Princeton, Mass.,	Total solids, 10.46 per cent.; fat, 3.60 per cent.; contained added water.
q 6552			Total solids, 10.30 per cent.; fat, 3.60 per cent.; contained added water.
q 6553			Total solids, 7.84 per cent.; fat, 2.40 per cent.; contained added water.
q 6554			Total solids, 7.27 per cent.; fat, 2.05 per cent.; contained added water.
q 6555			Total solids, 8.46 per cent.; fat, 2.70 per cent.; contained added water.
q 6556			Total solids, 7.10 per cent.; fat, 2.10 per cent.; contained added water.
14084	Milk,	John S. Gracie, Dartmouth, Mass.,	Total solids, 7.86 per cent.; fat, 2.10 per cent.; contained added water.
14112	Milk,	Charles Simonian, Methuen, Mass.,	Total solids, 11.77 per cent.; fat, 3.80 per cent.; contained added water.
14113			Total solids, 10.41 per cent.; fat, 3.40 per cent.; contained added water.
14114			Total solids, 11.04 per cent.; fat, 3.75 per cent.; contained added water.
14115			Total solids, 10.70 per cent.; fat, 3.40 per cent.; contained added water.
14116			Total solids, 10.60 per cent.; fat, 3.50 per cent.; contained added water.
14117			Total solids, 11.06 per cent.; fat, 3.60 per cent.; contained added water.
14118			Total solids, 11.03 per cent.; fat, 3.70 per cent.; contained added water.
14119			Total solids, 10.94 per cent.; fat, 3.70 per cent.; contained added water.

7091 It 7093 It 7095 It 7097 It	Milk, ...	James M. Nowland, Quincy Mass., ... Gaspar Petrongelie, Quincy, Mass., ...	Total solids, 11.30 per cent.; fat, 3.80 per cent.; contained added water. Total solids, 11.44 per cent.; fat, 4.00 per cent.; contained added water. Total solids, 11.35 per cent.; fat, 4.00 per cent.; contained added water. Total solids, 11.55 per cent.; fat, 4.00 per cent.; contained added water.
14008	Milk, ...	Lithuanian & Polish Grocery and Provision Company, Newton Upper Falls, Mass., ...	Total solids, 11.50 per cent.; fat, 2.60 per cent.; proteid, 3.16 per cent.; skimmed milk.
14013	Milk, ...	Chas. Bingiel, Newton Upper Falls, Mass., . . .	Total solids, 11.18 per cent.; fat, 2.00 per cent.; proteid, 3.17 per cent.; skimmed milk.
q6616 q6617	Milk, ...	Este Creamery Company, Marlborough, Mass., .	Total solids, 10.40 per cent.; fat, 1.20 per cent.; proteid, 3.53 per cent.; skimmed milk. Total solids, 10.40 per cent.; fat, 1.20 per cent.; proteid, 3.51 per cent.; skimmed milk.

INSPECTION OF DAIRIES.

During the month of March, 1911, 303 dairies were examined in the following places: —

Place.	Number examined.	Number found to present no Objectionable Features.	Per Cent.	Number concerning which Letters were sent.	Per Cent.
Attleborough,	8	4	50.00	4	50.00
Second inspection,	42	28	66.67	14	33.33
Fitchburg,	25	14	56.00	11	44.00
Second inspection,	34	22	64.71	12	35.29
Third inspection,	2	2	100.00	–	–
Lunenburg,	7	3	42.86	4	57.14
Second inspection,	38	29	76.32	9	23.68
North Attleborough,	8	6	75.00	2	25.00
Second inspection,	14	13	92.86	1	7.14
Plainville,	5	3	60.00	2	40.00
Second inspection,	8	6	75.00	2	25.00
Rehoboth,	1	–	–	1	100.00
Seekonk,	4	4	100.00	–	–
Second inspection,	14	6	42.86	8	57.14

Total number of dairies examined,	303
Number found to be free from objectionable conditions,	140
Number concerning which letters were sent,	70
Total number of conditions to which attention was called,	164
Percentage of dairies which passed inspection,	46.20

In addition to the above, 93 dairies were visited at which the sale of milk had been discontinued.

The names of the owners of the dairies found to be worthy of commendation follow: —

Attleborough.

Class B.

Adler, Frank
Allen, G. W.* †
Attleborough Town Farm *
Barney, Alban S.* †
Benson, John
Brochu, Joseph E.
Cargill, Walter B.*
Carnes, William M.* †
Carpenter, Charles* †
Carpenter, Eustice *
Clement, A. J.* †
Cobb, Mrs. Josephine * †
Cole, P. R.*
Cooper, Alvin * †
Cooper, F. P.*
Cooper, Miss M. A.*
Cummings, Frank A. * †
Curtis, Henry *
Fisher, John M.* †
Friedman, Samuel *
Jellison, F. I.*
Kaufman, A.* †
Mahler, Henry C.*
Parker, George G.*
Perry, Frank
Richardson, Henry* †
Sheffield, G. St. John * †
Stowell, C. H.* †
Thayer, Oscar S.*
Tomlinson, F.*
Watkins, A. H.* †
Wendall, Olof A.* †

* Second inspection. † Reported favorably on first inspection.

Fitchburg.

Class B.

Bascome, I. O.*
Benedict, Henry A.
Bingham, Russell, M.D.
Brown, J. D.*
Caswell, A. B.*
Cutting, George A.*
Cox, James
Davis, S. W.*
Desgroseillieure, U.*
Fairbanks, C. L.* †
Fitchburg City Farm
Ford, Daniel*
Goodfellow, Arthur
Gramo, Estate of Joseph *
Grubb, J. G.* †
Grubb, Robert
Harrington, G. H.* †
Harrington, H. L.*
Harris, A. S.*
Hartwell, N. W.‡
Hertel, Robert *
Hirvi, Jacob * †
Johnson, Nester
Lawrence, A. G.* †
Lyons, C. E.
McIntire, E. A. & Son ‡
Moilanes, Larz * †
Nordman, John
Pierce, R. W.*
Pratt & McNally
Putnam, J. E.* †
Robinson, D. A.*
Rose, A. G. & Son
Scripture, A. W.*
Scripture, Charles E.
Stockwell, Ozil
Taylor, A.*
Wuoti, Herman

Lunenburg.

Class A.

Proctor, George N.* †

Class B.

Adams, Henry C.*
Allen, Charles L.* †
Anderson, George H.*
Berg, Axel*
Billings, G. A.*
Brown, James*
Burnap, Walter*
Carr, F. B.*
Charlton, Joseph W.*
Conwell, George E.*
Eaton, H. A.*
Fish, W. J.*
Fuller, Dana L.* †
Harrington, James L.*
Hoisington, A. L.*
Lunenburg Town Farm * †
Moore, George F.*
Peabody, W. R.
Peabody, W. S.* †
Price, Beverly * †
Proctor, Ernest K.*
Proctor, W. R., Jr.*
Sherwin, F. H.* †
Sherwood, A. H.*
Snow, James B.*
Stone, Stillman *
Thacher, George
Whitcomb, George H.*
White, J. H.*
Williams, George F.*
Young, Edwin

North Attleborough.

Class A.

Caldwell, H. P.* †

Class B.

Arnold, Henry E.
Beausoliel, Rock
Caldwell, W. H.* †
Draper, G. B.*
Eldredge, Horace*
Everett, Dr. F. E.*
Gorman, George*
Henshaw, S. H.*
Jacobs, John*
Jenckes, E. E.
Johnson, O. W.
McCartney, Robert A.* †
Ralph, W. D.
Rhodes, H. E.*
Sayles, Millens
Sweetland, R. M.*
Titus, H. J.* †
Tourtelott, A. F.*

Plainville.

Class B.

Bolton, Joshua* †
Herring, F. E.* †
Maxey, Virgil
Moore, C. N.* †
Root, Henry
Simmons, S.* †
Smith, Sylvester* †
Stolworthy, George* †
Wilkins, W. C. & G. C.

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* Second inspection. † Reported favorably on first inspection. ‡ Third inspection.

SEEKONK.

Class A.

Hopkins, F. W.

Class B.

Anderson, Charles E.
Appleby, E. S.
Cole, Estate of Wm. M.*
Dennis, W. R.*†
Johnson, Fred*
Martitz, O. A.*
Perrin, C. B.*†
Ricker, G. E.*†
Stone, Solomon

PRACTICAL STUDIES IN OCCUPATIONAL HYGIENE.

BY ELLIOTT WASHBURN, M.D., STATE INSPECTOR OF HEALTH OF NORFOLK AND NORTH BRISTOL COUNTIES.

Occupational hygiene, or the hygiene of occupation, is the study of the effect of occupation upon health and length of life. Such a study to be practical involves a first-hand knowledge of the sanitary conditions of industrial establishments, as well as some knowledge of the processes in which the operatives are engaged. It is understood, of course, that outside influences, which frequently affect the health of the workers as much as, or more than, the circumstances of his trade, must always be given due consideration.

While the law recognizes the hygienic value of good light, adequate ventilation and cleanliness, to the extent of requiring that factories and workshops shall be well lighted, well ventilated and kept clean, these factors must necessarily vary with the trade or industry carried on. Light that is satisfactory for the purposes of a machine shop is inadequate for the process of engraving in a silversmithing establishment. In other words, light must be adequate for the work to be done. The work of "drawing-in," for example, in the textile industry, demands — in order to prevent eye strain and its train of symptoms — a degree of light, both natural and artificial, which is not essential in the carding rooms of the same industry. Similarly, the ventilation which must be considered as reasonably satisfactory in a foundry would be unsatisfactory in a room in which women and girls work at sewing. Cleanliness, too, must of necessity vary with the occupation, since "reasonably clean" in one industry might be "dirty" in another. It is desirable, therefore, that these three conditions — light, ventilation and cleanliness — shall be kept at as high a standard as the necessary work shall

* Second inspection. † Reported favorably on first inspection.

permit. The employers are beginning to recognize more fully the value of good light and cleanliness. The improved spirit and cheerfulness at work of workers who have been transferred from old, somewhat dark and dingy rooms to well-lighted, clean and pleasant surroundings has been found to increase the efficiency of the workers, so that good working conditions have not only hygienic value to employees, but also cash value to employers. For example, 28 men, who had worked at grinding on large emery wheels in a poorly ventilated basement, in which the light was so poor that artificial lighting was necessary throughout the entire day, when transferred to a new building in which the ventilation and light were excellent, increased the output of their work nearly 33 per cent.

The student of occupational hygiene finds that light, ventilation and cleanliness in industrial establishments are hygienic factors common to all occupations, and, in addition, that processes in certain occupations cause exposure to dusts, fumes and vapors of noxious chemicals, metallic poisons, extremes of heat, excessive humidity, overcrowding, constrained postures, excessive use of one set of muscles and variations in atmospheric pressure. It follows, therefore, that the hygiene of every occupation must be studied separately, inasmuch as there are few occupations in which at least one unhygienic condition may not be found. In certain industries unhygienic conditions are created by the processes carried on. Some processes are mildly injurious to the health of employees exposed to them; others are distinctly dangerous; while in certain others combinations of several mildly objectionable conditions may produce a distinctly objectionable total.

Unhygienic conditions created by the industry may be divided into two classes: those which are in a large measure preventable, and those which are unavoidable. Cotton and wool dust in the textile trades, mineral and metallic dust created by dry grinding on emery wheels (or by the operation of sand blasting), wood dust in the woodworking trades, leather dust in the boot and shoe industry, cotton dust created by the process of polishing on rag wheels, and pearl dust in the pearl industry, expose men, boys, women and girls to the inherent dangers from the inhalation of such dust, which is more or less irritating in every case, and if the dust is metallic, as, for example, lead or mercury, to the added danger of poison. Proper and practicable systems for protecting employees against such kinds of dust may reduce the danger to a minimum. Fumes arising from strong nitric, sulphuric, hydrochloric and glacial acetic acids, and from such toxic metals as lead, zinc, antimony, copper and tin, may be rendered much less harmful by conducting the processes under hoods which are equipped with fans for

the removal of the fumes to the outer air. The injection of steam into rooms in textile mills for commercial purposes may give rise to excessive humidity which decreases the efficiency of those exposed to it, often women. This, to a considerable extent, is avoidable. Overheating and overcrowding, often avoidable, impair the ventilation of workrooms. Exposure to naphtha fumes, so common in rubber and in shoe factories, may be materially reduced by keeping naphtha cement in properly covered receptacles, and by insuring adequate ventilation.

On the other hand, certain processes create unavoidable unhygienic conditions. The excessive use of certain groups of muscles is necessary in some; the constant kicking of a foot press in the jewelry trade, or of the treadle of a paper machine in the paper box industry, may lead to leg fatigue and pain in young people. Constrained attitudes and cramped postures are necessary accompaniments of some work. Unavoidable exposure to overheat is caused by the nature of such processes as the sizing of straw hats, the dressing of thread in the shoe lace industry, the annealing of glass and the pouring of molten metals. The sorter of soiled clothing in the laundry is exposed to material which may be infectious. The wool sorter, the hide handler and the sorter of animal hair come in possible contact with the bacillus of anthrax. In the manufacture of patent leather, those who japan the leather are unavoidably exposed to objectionable amounts of naphtha fumes. The mixer in the manufacture of rubber goods handles and is necessarily exposed to lead. The brass molder is exposed to the fumes of zinc oxide, and the electrotyper to fumes of molten lead and antimony. The operation of sand buffing exposes men to much dust of sand and pumice; the use of dust-removing appliances would remove the pumice and destroy the process. Polishers and grinders are in some instances unavoidably exposed to irritating dusts, even when fans, suction pipes and hoods are used; for example, in the manufacture of pearl buttons and ornaments and in the process of cleaning iron and steel castings by sand blasting. What are the probable or possible effects upon health of these processes? How many workers have been subjected to industrial poisoning? How many have contracted tuberculosis? In certain occupations the workers are obliged to stand practically during their entire working time. What effect does this have upon the production of flat foot? What effect upon women? Constant sitting is required in other occupations, such as bench work in the jewelry industry. Are such seats provided as will not oblige the workers, especially women and minors, to assume unhygienic positions? The constant use of the eyes for near work is required in a large percentage of the workers in the jewelry industry. Is this the cause for the fact that nearly 50 per cent. of the

employees wear glasses? To what extent are the neurasthenic conditions, so common in the "drawing-in" women in textile trades, due to a constant sitting position and the steady use of the eyes at a process in which acuteness of vision and excellent light are required?

Another factor in occupational hygiene is the relation of the work done to the person who does it. Is a boy doing work that is fit for a man only to do? Is a girl doing that fit for a woman only? Are minors exposed to unavoidable influences to which only adults should be exposed? If so, is the danger to such young persons so great that they should be legally excluded from the occupation?

Previous to 1904 practically little study had been made concerning the effect of industry upon the health of persons employed in our Massachusetts factories. Since then much has been done by the State Board of Health and the State Inspectors of Health to safeguard the workers and the community at large. Many avoidable unhygienic conditions have been corrected; unavoidable dangerous conditions have been made less dangerous; employers have been taught the advantages of providing for their employees the best possible working conditions, and employees have been instructed how to take practicable precautions against dangers connected with their work.

The study of occupational hygiene as outlined above has led in every instance to practical results.

Thus the data collected by the State Inspectors of Health relative to occupational hygiene are of immediate practical value, and, used in connection with the results obtained from sanitary investigations, and inquiries relative to the causes of disease, the sources of mortality and the effects of localities, conditions and circumstances, tend increasingly to promote the public health.

REPORT OF THE COMMITTEE ON TYPHOID FEVER TO THE MASSACHUSETTS ASSOCIATION OF BOARDS OF HEALTH.[1]

A belief that American sanitary officials are not at present doing nearly as much as they should to prevent the spread of typhoid fever was the motive which lead to the appointment of this committee. Even the departments of health in our largest and best-governed cities are far from exercising the control which they could; and in smaller communities, with less means, active preventive measures against the disease are often sadly neglected. The committee therefore feel that it is their

[1] Reprinted from the "American Journal of Public Hygiene," Vol. XX., No. 4, November, 1910.

duty to urge, in the most emphatic way, certain definite measures which the local boards of health ought to recognize as incumbent upon them to carry out. It was even suggested that legislation might be desirable, which would give to the State Board of Health authority to compel local health officers to carry out the necessary preventive measures. But it is earnestly hoped that the sanitary officials of our cities and towns will awake to a realization of their duties, and of the good results which are likely to follow more energetic preventive measures, so that such centralization of sanitary administration will never be considered necessary.

The discussion of this subject at the last meeting related to the extension of typhoid fever by contact infection, or by the direct contamination of food materials by the hands of patients or carriers. The committee have therefore restricted their recommendations to measures intended to prevent this mode of disease extension. The importance of the distribution of typhoid fever by means of sewage pollution of water was not lost sight of, but the work of the Massachusetts State Board of Health has, at least in this Commonwealth, pretty well educated the public to realize the necessity for correct water and sewer engineering. Indeed, the larger communities of the Commonwealth are well protected against water-borne epidemics. Engineers have been wont to call non-epidemic, non-water-borne typhoid fever, which occurs with even the purest water supply, "residual typhoid." We now know that this "residual typhoid," which has been too long neglected, is due chiefly to fairly direct modes of contact infection. It is therefore necessary to bend our energies to the eradication of this type of the disease, and to do so successfully we must realize that it is as truly a contagious disease as is diphtheria or scarlet fever, though not to the same degree.

The first requisite for a successful campaign against a contagious disease is the prompt report of cases. One reason why physicians fail to report typhoid fever is because they do not see any results. The report is too often merely placed on file. If the case is promptly visited, water, milk and food investigated, and specific directions given as to disinfection and the protection of the rest of the family and the public, physicians will realize that their reports are of some consequence, and have it in mind to make them promptly. Failure and delay in notification, in a large proportion of cases, are due to failure or delay in making a diagnosis. Hence the health department, local where possible, State where the local fails, should provide not only for the Widal test, but, what is much more important, for cultures from blood and excreta. Furthermore, every facility must be given the physician for sending in the material, and prompt notice of results must be sent to him. The case

should then be visited at the earliest moment by an agent of the health office, a medical man or a visiting nurse, or both. The epidemiological history of the case should be obtained, and not general advice given, but specific directions as to disinfection of the excreta and clothing, and as to what must be done by the nurse to avoid infecting herself and carrying the infection to others. The patient should be isolated in much the same way in which diphtheria patients are isolated. The majority of the committee believe that the best way to secure such isolation is to placard the house, both front and rear, the rear placard, usually the one seen by milkmen and grocers, being the most important. In the families of the poor, where there must be great danger of the infection of other members of the family, removal to a hospital is desirable where possible. If any member of the family is a food handler, it must be seen to that there is no chance for the spread of the disease by this means. Circulars of information may be left with the family, but these should never take the place of direct personal instruction.

If typhoid fever cases are to be isolated, a criterion must be established for the termination of isolation. With the inadequate laboratory facilities now available, it is impracticable at present to require bacteriological tests for all cases. It is believed, however, that such tests should be demanded for handlers of food. For others, a good working rule would seem to be to terminate isolation when the temperature of the patient has been normal for two weeks. It has been shown that by this time the large majority of cases no longer excrete the bacilli. It is not believed at present to be feasible to control chronic carriers unless they are food handlers. If they are food handlers they ought to be restrained from pursuing their usual vocations, and the health department should keep itself informed as to their whereabouts and their business. In order to prevent the development of carriers, and to eliminate the danger period after convalescence, it would seem proper for local health officials to urge the administration, throughout the course of the disease, of urotropine, otherwise known as hexamethylene tetramine.

Dr. Richardson says: —

Approximately 25 per cent. of all typhoid cases show, especially in the later stages of the disease, the presence of the typhoid bacillus in the urine, and the specific germs may persist in the urine for months or even years. For the elimination of this danger, I recommended, in 1898, the use of hexamethylene tetramine, under the name of urotropine, and the favorable results obtained by me have in general been confirmed by a great many other observers in other parts of the world. As in many other fields, however, prevention is much more easily brought about than a cure. That is to say, if there is present more than a simple bacilluria, and if a true inflammatory

process has been set up in the urinary passages, then the result of medication is much less successful and uniform. Where, however, the question is one of the simple presence of the bacillus in the urine, the results following the administration of hexamethylene tetramine are almost theatrical. I have seen, for instance, a urine absolutely cloudy with typhoid bacilli become absolutely clear within forty-eight hours. In my opinion, therefore, hexamethylene tetramine should be given as a urinary prophylactic in all cases of typhoid fever, and should be continued for at least two weeks into convalescence. A proper dose would be 5 grains three times a day, although in cases where actual inflammation exists larger doses can be given, even up to 15 grains every four hours.

In rare instances the use of this drug may be followed by painful micturition and hæmaturia. In such cases, of course, the drug must be omitted. There is no record of any permanent injury having been done by the drug.

There are a number of proprietary names for this drug, among which are urotropine, cystogen, aminiform and formin.

It is possible, furthermore, that the drug may be of value in restricting the number of typhoid carriers. Crowe has found that the drug is eliminated in the cerebro-spinal fluid and also in the bile. For this reason it is very possible that typhoid carriers, who, in many instances at least, suffer from a chronic infection of the gall bladder, may be very materially reduced in number.

Besides the preceding suggestions which have to do directly with the personal sanitation of the patient, there are certain measures relating to municipal sanitation which are of importance in the prevention of typhoid fever. So far as the environment is concerned, the most important factor in the spread of typhoid fever is the privy vault. In it are stored the bacilli of the disease, and from it they may be distributed by flies, by the hands, and in badly constructed ones, by rats, dogs, cats, hens, etc. Moreover, the privy is itself a breeding place of flies, and its mere presence on the premises encourages untidiness and the careless deposit of slops and excreta on the ground. Abundant evidence from all over the world shows that the removal of privy vaults causes a notable decrease in the prevalence of typhoid fever. Where there are no sewers, privy vaults are often necessary, and it should be the duty of boards of health, a duty which is sadly neglected, — to see that privy vaults are tight, covered and fly proof, and that the privy building is tight and sufficiently screened. Builders and contractors' privies should be looked after even more carefully than are house privies. Rules and regulations in regard to the committing of nuisances ought to be rigidly and continuously enforced by boards of health.

In order to more clearly bring these matters to the attention of boards of health the committee makes the following

Recommendations.

I. Local boards of health should make every possible effort to secure the prompt reporting of all cases of typhoid fever.

II. The State Board of Health should provide for the physicians and health officers of the Commonwealth bacteriological examinations of blood, urine and feces for the presence of typhoid bacilli; it is also recommended that the local board of health laboratories take up this work as soon as practicable.

III. It should be the duty of every board of health to send a trained agent to the household from which a case of typhoid fever is reported, within forty-eight hours, for the purpose of seeing that the case is properly isolated, and the stools and urine effectively disinfected.

The committee recommends that the stools and urine be disinfected with milk of lime (1 part freshly slaked lime to 8 parts of water), or chlorinated lime (6 per cent.), or carbolic acid (5 per cent.), or formalin (10 per cent.), or by boiling in soda solution. The discharges should be received in a vessel containing some of the germicidal solution, and more should be added so as to cover the mass and be equal to at least twice the volume of the material to be disinfected. The entire contents of the vessel should then be thoroughly stirred, special care being taken to disintegrate lumps. The vessel should be covered and allowed to stand no less than one hour before the contents are discarded.

The disinfectant should be furnished free of charge at the direction of the health officer.

IV. Local boards of health should investigate the source of infection, especially the milk and water supply, of every case of typhoid fever reported, and should send a copy of the report of such investigation to the State Board of Health.

V. Every house in which there is a case of typhoid fever should be placarded.

VI. All cases of typhoid fever should be isolated.

VII. All cases of typhoid fever should be given hexamethylene tetramine throughout the disease, and for two weeks after the temperature becomes normal.

VIII. Isolation may ordinarily be terminated when the temperature has continued normal for two weeks, as certified by the attending physician. But patients who in their occupation are likely to infect food should not be released until four consecutive negative cultures from stools and urine have been obtained.

IX. Bacilli carriers should under no circumstances be allowed to engage in occupations which necessitate the handling of food; for example, carriers should not be employed as cooks or waitresses, or in any part of the dairy industry.

X. All carriers should be under the closest supervision of the local health authorities, and in case a carrier moves to another community, the health authorities of that community should be notified.

XI. It should be the duty of the local boards of health having cognizance of a case of typhoid fever on a dairy farm, in addition to other measures, to notify promptly the boards of health of the communities to which the milk from that farm is shipped.

XII. Wherever there is a public sewer, local boards of health should cause the prompt removal of all privy vaults, and where privy vaults are necessary, the board of health should cause them to be properly constructed.

XIII. Boards of health should institute active measures for fly suppression.

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SMALLPOX AND VACCINATION IN THE PHILIPPINE ISLANDS.[1]

BY VICTOR G. HEISER, PASSED ASSISTANT SURGEON, UNITED STATES PUBLIC HEALTH AND MARINE HOSPITAL SERVICE, CHIEF QUARANTINE OFFICER AND DIRECTOR OF HEALTH FOR THE PHILIPPINE ISLANDS, AND ROBERT OLESON, ASSISTANT SURGEON, UNITED STATES PUBLIC HEALTH AND MARINE HOSPITAL SERVICE.

At probably no time in the world's history has the efficiency of vaccination as a preventive for smallpox been so conclusively and effectively demonstrated as in the Philippine Islands since American occupation.

The evidence of its value is incontestible.

During Spanish times it was necessary, each year during the dry season, to erect in Manila a large temporary hospital, to which the many

[1] Reprint from the "Public Health Reports," Vol. XXVI., No. 10, 1911.

hundreds of victims of smallpox could be taken. The great majority of them died.

During the past five years not one person has died in Manila from smallpox who had been successfully vaccinated during the five previous years; nor has any one died of smallpox in Manila since June, 1909.

Since 1907, when the systematic vaccination was completed of the six provinces near Manila, which have an approximate population of 1,000,000, and which from time immemorial had an annual average mortality from smallpox of at least 6,000 persons, not one person has died of smallpox who had been successfully vaccinated, and only a few scattering cases have occurred. During the past two years some deaths have been reported, but careful investigation shows that not one death took place in a vaccinated person.

In May, 1904, the United States army transport "Liscum" left Manila with 26 cabin passengers, 170 steerage passengers, 16 officers and 80 members of crew, or a total of 292 souls on board. During the first week smallpox broke out aboard the vessel in an unvaccinated child in the steerage. An examination of the personnel on board showed that 3 members had never been vaccinated. Within a period of two weeks these unvaccinated persons were stricken with the disease and not one of the 289 remaining persons contracted it.

During October, 1910, information was received that in the remote town of Baler, with a population of 2,417, situated on the east coast of Luzon, smallpox had broken out among the unvaccinated children. There were 100 cases and 27 people had already died. An average of 35 new cases was occurring daily. Through the efforts of the Hon. Manuel Quezon, delegate from the Philippine Islands to the Congress of the United States, the people were induced to submit to vaccination. The number of new infections decreased rapidly, and fourteen days after the last person in that town had been vaccinated, about October 20, no further cases of smallpox occurred.

An accurate estimate of the prevalence of smallpox in the Philippine Islands under the Spanish régime is not available, but judging from the partial reports received from the provinces during the first few years of American occupation the death rate must have been appallingly heavy.

The policy of persistent systematic vaccination, inaugurated twelve years ago by the American sanitary authorities, has been attended with excellent results.

In the larger cities and easily accessible localities the disease has become mild, relatively infrequent, and death is rare. Severe outbreaks of variola are occasionally reported in some of the remote communities. In these instances, however, it has invariably been found that vaccination

has been incomplete. Either it has been impossible to place a potent virus in the field for vaccination, or the people. through ignorance, superstition or willful neglect, have failed to avail themselves of the proven prophylactic advantages of the measure.

In order that the efficiency of protective inoculation may be illustrated, a few of the many successes which have attended the efforts of the bureau of health for the Philippines are here cited.

Through an unfortunate combination of circumstances, vaccination was suspended during a period of nine years in Bagac, an isolated barrio of 2,000 inhabitants in the Province of Bataan. Being situated on the monsoon-swept China seacoast, the town is accessible by sea only during short seasons. To reach the town overland requires strenuous travel over an exceedingly wretched trail. From 1896 to 1901, when the country was in the throes of war and rebellion, it was impracticable to carry on the work of vaccination, and Bagac was necessarily neglected. Later, protective inoculation was still further delayed by the inability of the provincial physician, through physical infirmity, to reach the town. In 1905 there was a widespread epidemic of smallpox in Bagac. The American physician who investigated the outbreak found that there were one or more cases in every house. Especially noteworthy was the fact that a few persons who had been vaccinated during the Spanish régime remained free from the disease. Within two weeks after the completion of thorough vaccination new cases ceased to appear, and the town remained free from variola thereafter.

That there is a decided difference between the results obtained by desultory vaccination and those obtained from the institution of thorough measures became apparent in the last epidemic in the city of Iloilo. In July, 1909, there occurred 21 deaths from smallpox in that city. As the disease had always existed to a considerable degree, it was difficult to persuade the local sanitary officials to bestir themselves, but after discussing the subject they consented to undertake a complete campaign of vaccination. In August there were 12 deaths, in September 8 and in October 1. Since that time but 1 mild case of varioloid has been recorded in a city which previously had rarely, if ever, been free from variola.

In Pampanga Province there were 278 deaths from smallpox in 1904 and 168 in 1905. After vaccination was begun with some degree of regularity the decrease in the ravages of the disease became manifest: 1906, 35 deaths; 1907, 14 deaths; later, to date, no deaths.

During the systematic vaccination of the Province of Albay, with a population of 234,000, bitter opposition was encountered in the towns of Tabaco and Malinao. Many people remained away from the towns until after the departure of the vaccinators. The following year 40

deaths from variola occurred in these two localities, the only cases in the entire province. The authorities suppressed the disease by enforced vaccination of those who had previously escaped, and since then there has been no smallpox in the province.

In January, 1910, the district health officer of Ilocos Sur was summoned to the town of San Esteban to aid in combating an epidemic of smallpox. The work of thorough vaccination began on January 26, after the great majority of cases had developed. The beneficial results were immediately apparent, as shown by the following enumeration of cases: —

	Cases.	Deaths.
1910.		
January,	126	29
February,	75	22
March,	10	6
April,	1	1

Subsequently there were no cases. Of the 58 persons who succumbed to smallpox, not 1 had a vaccination scar, nor did any of the 154 survivors have scars denoting recent successful vaccination. The instance is particularly noteworthy, because attention was directed solely to vaccination. The epidemic occurred in the dry season, climatic and sanitary conditions remaining the same.

That portion of the Province of La Union lying north of the town of San Juan was systematically vaccinated in 1905, with the resulting disappearance of smallpox. In the unvaccinated southern part of the province there were yearly outbreaks, even while the northern portion remained free from the disease. Following systematic vaccination, variola was also eradicated from the southern portion, a phenomenon commented upon with amazement by the impressionable people.

After a strenuous campaign of vaccination, as a result of which smallpox was practically eradicated from the Province of Ambos Camarines, the authorities sought to eliminate every possible opportunity for the reappearance of the disease. It was decided that the principal danger was incurred by permitting the 15,000 children who were born annually to remain unprotected. Consequently, four experienced men were employed to make continuous trips through the province, arriving at each locality at least twice a year. These men obtain the birth records and do not leave a community until every infant has been successfully vaccinated.

Attention is also directed to transients. Every newcomer must produce a certificate of recent successful vaccination or submit to the operation. That the efforts of the officials in the Ambos Camarines have been wisely directed is evinced in the following statistics: —

	Deaths.
Third quarter, 1906,	208
Fourth quarter, 1906,	80
First quarter, 1907,	8

Later, to date, no deaths.

Prior to 1905, between 3,000 and 4,000 deaths from smallpox were reported each year in the Province of Cebu. In 1905 and 1906 the systematic vaccination of the 650,000 inhabitants was undertaken. In 1907 there were only 94 deaths, and in 1908, 84 deaths from the disease.

As smallpox was apparently on the wane, vaccination was suspended for two years. In the meanwhile there was a decided increase in the number of unprotected people, due to births and immigration from neighboring islands. During 1909 there was a recrudescence of variola, in which 736 persons lost their lives. Investigation proved that over 90 per cent. of all the cases were among unvaccinated children, that no cases were reported among persons recently successfully vaccinated, and that the small number of adults attacked were nearly all unvaccinated. The province has again been thoroughly vaccinated.

In July, 1908, Pangasinan Province was swept by an epidemic of cholera, and for a time vaccination was entirely suspended, the vaccinators being made sanitary inspectors and employed in combating the new scourge.

In October, 1908, the cholera having subsided, and a virus having been obtained which gave as high as 90 per cent. of successes, vaccination was renewed with vigor. The province has been singularly free from smallpox since the completion of systematic vaccination.

	Cases.	Deaths.
1908.		
First trimester,	4,080	2,282
Second trimester,	2,136	1,350
Third trimester,	501	326
Fourth trimester,	218	132
1909.		
First trimester,	267	123
Second trimester,	254	99
Third trimester,	108	48
Fourth trimester,	7	3

The problem of eradicating smallpox from the Philippine Islands is one involving the thorough and repeated vaccination of all the people. Until the local sanitary officials understand that infants must be vaccinated shortly after birth, that unprotected transients must submit to the

operation, and that all the people must be periodically revaccinated, smallpox will still continue to prevail.

Already notable progress along these lines is being made by the employment of permanent vaccinators.

As improved methods for the preservation of virus are discovered, as facilities for travel are increased, and the people are educated to the true value of protective inoculation, it is not too much to expect that smallpox will be reduced to a negligible minimum.

Chapter 218, Acts of 1911.

An Act to require the state board of health to make analyses of paint, turpentine and linseed oil in certain cases.

Be it enacted, etc., as follows:

Section 1. The state board of health shall make, free of charge, a chemical analysis of paint, turpentine or linseed oil, or any synthetic substitute for any of the said articles, or any preparation containing the same, when submitted to it by the chief of the district police; and the board shall furnish to the said chief a certificate of the analyses, which shall be prima facie evidence of the composition and quality of the materials so analyzed.

Section 2. This act shall take effect upon its passage. [*Approved March 28, 1911.*

Chapter 229, Acts of 1911.

An Act relative to the employment of women in mercantile, manufacturing and mechanical establishments.

Be it enacted, etc., as follows:

Section 1. No woman shall knowingly be employed in laboring in a mercantile, manufacturing or mechanical establishment within two weeks before or four weeks after childbirth.

Section 2. The foregoing section shall be included in the notice with regard to the employment of women now required to be posted in mercantile, manufacturing and mechanical establishments, and the provisions thereof shall be enforced by the district police.

Section 3. Violations of section one of this act shall be punished by a fine not exceeding one hundred dollars.

Section 4. This act shall take effect on the first day of January, nineteen hundred and twelve. [*Approved March 31, 1911.*

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Approved by
The State Board of Publication.

WEEKLY RETURNS OF DEATHS FROM CITIES AND TOWNS OF MORE THAN 10,000 POPULATION.

WEEK ENDING APRIL 1, 1911.

CITIES AND TOWNS.	Population. Census for 1910.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —					
				Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	670,585	233	50	95	36	30	4	1	1
Worcester,	145,986	42	12	13	7	2	1	–	–
Fall River,	119,295	37	17	21	13	2	1	–	1
Lowell,	106,294	40	9	11	7	2	–	–	–
Cambridge,	104,839	45	13	17	6	6	1	–	–
New Bedford,	96,652	29	12	8	6	2	–	–	–
Lynn,	89,336	18	3	3	1	1	–	1	–
Springfield,	88,926	26	6	10	4	5	–	–	–
Lawrence,	85,892	40	21	22	7	3	1	–	1
Somerville,	77,236	23	3	4	–	3	–	–	–
Holyoke,	57,730	15	6	6	6	–	–	–	–
Brockton,	56,878	16	2	10	4	3	–	–	–
Malden,	44,404	12	1	4	2	1	–	–	–
Haverhill,	44,115	19	6	6	4	1	–	–	–
Salem,	43,697	14	4	8	5	1	–	–	–
Newton,	39,806	13	1	3	3	–	–	–	–
Fitchburg,	37,826	8	1	2	2	–	–	–	–
Taunton,	34,259	7	–	2	2	–	–	–	–
Everett,	33,484	6	2	3	2	1	–	–	–
Quincy,	32,642	7	0	1	1	–	–	–	–
Chelsea,	32,452	13	5	1	–	–	–	–	–
Pittsfield,	32,121	7	1	1	–	1	–	–	–
Waltham,	27,834	7	0	3	2	1	–	–	–
Brookline,	27,792	9	–	1	–	1	–	–	–
Chicopee,	25,401	8	3	3	2	1	–	–	–
Gloucester,	24,398	6	1	1	–	1	–	–	–
Medford,	23,150	8	1	2	–	1	–	–	–
North Adams,	22,019	11	2	2	2	–	–	–	–
Northampton,	19,431	6	0	–	–	–	–	–	–
Beverly,	18,650	5	2	1	1	–	–	–	–
Revere,	18,219	3	–	1	–	1	–	–	–
Leominster,	17,580	2	–	–	–	–	–	–	–
Attleborough,	16,215	7	1	1	1	–	–	–	–
Westfield,	16,044	8	1	4	1	3	–	–	–
Peabody,	15,721	–	–	–	–	–	–	–	–
Melrose,	15,715	4	0	1	–	1	–	–	–
Hyde Park,	15,507	3	–	–	–	–	–	–	–
Woburn,	15,308	10	4	3	3	–	–	–	–
Newburyport,	14,949	4	–	1	–	1	–	–	–
Gardner,	14,699	5	2	2	1	–	–	–	–
Marlborough,	14,579	1	0	–	–	–	–	–	–
Clinton,	13,075	2	–	1	–	–	–	–	–
Milford,	13,055	7	1	4	3	1	–	–	–
Adams,	13,026	3	2	2	1	–	–	–	–
Framingham,	12,948	4	1	–	–	–	–	–	–
Weymouth,	12,895	–	–	–	–	–	–	–	–
Watertown,	12,875	6	1	1	–	–	–	1	–
Southbridge,	12,592	2	–	–	–	–	–	–	–
Plymouth,	12,141	–	–	–	–	–	–	–	–
Webster,	11,509	2	1	1	1	–	–	–	–
Methuen,	11,448	5	1	3	–	3	–	–	–
Wakefield,	11,404	2	–	1	–	–	–	1	–
Arlington,	11,187	1	–	–	–	–	–	–	–
Greenfield,	10,427	3	1	1	–	–	–	–	1
Winthrop,	10,132	2	–	1	–	–	1	–	–
Recapitulation.									
Total of reporting towns,	2,565,623	816	200	292	136	79	11	4	4

WEEK ENDING APRIL 8, 1911.

CITIES AND TOWNS.	Population. Census for 1910.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM— Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	670,585	290	64	111	29	36	7		1
Worcester,	145,986	46	15	15	9	1	–	–	–
Fall River,	119,295	42	–	25	16	5	1	–	–
Lowell,	106,294	26	8	7	5	2	–	–	–
Cambridge,	104,839	37	13	18	9	3	–	–	2
New Bedford,	96,652	41	14	17	10	5	–	–	–
Lynn,	89,336	23	3	7	4	3	–	–	–
Springfield,	88,926	26	5	8	5	2	–	–	–
Lawrence,	85,892	32	15	14	8	3	–	–	–
Somerville,	77,236	29	6	7	3	–	–	–	–
Holyoke,	57,730	20	7	10	4	3	1	–	–
Brockton,	56,878	17	4	6	5	–	–	–	–
Malden,	44,404	10	2	3	2	–	–	–	–
Haverhill,	44,115	12	3	4	3	1	–	–	–
Salem,	43,697	9	3	2	1	–	–	–	–
Newton,	39,806	5	–	1	–	–	–	–	–
Fitchburg,	37,826	12	3	2	1	1	–	–	–
Taunton,	34,259	13	4	3	1	–	–	–	–
Everett,	33,484	6	2	2	–	1	–	–	–
Quincy,	32,642	9	1	1	–	1	–	–	–
Chelsea,	32,452	9	1	1	1	–	–	–	–
Pittsfield,	32,121	18	2	7	5	2	–	–	–
Waltham,	27,834	6	1	3	1	–	–	–	–
Brookline,	27,792	–	–	–	–	–	–	–	–
Chicopee,	25,401	5	3	–	–	–	–	–	–
Gloucester,	24,398	4	1	–	–	–	–	–	–
Medford,	23,150	9	1	2	1	–	–	–	1
North Adams,	22,019	4	1	2	–	1	1	–	–
Northampton,	19,431	9	2	2	2	–	–	–	–
Beverly,	18,650	0	–	–	–	–	–	–	–
Revere,	18,219	1	1	–	–	–	–	–	–
Leominster,	17,580	3	1	1	1	–	–	–	–
Attleborough,	16,215	4	2	–	–	–	–	–	–
Westfield,	16,044	2	1	–	–	–	–	–	–
Peabody,	15,721	–	–	–	–	–	–	–	–
Melrose,	15,715	2	0	–	–	–	–	–	–
Hyde Park,	15,507	6	1	1	1	–	–	–	–
Woburn,	15,308	6	2	1	–	1	–	–	–
Newburyport,	14,949	7	–	2	2	–	–	–	–
Gardner,	14,699	4	3	2	1	–	–	–	–
Marlborough,	14,579	4	1	1	1	–	–	–	–
Clinton,	13,075	0	–	–	–	–	–	–	–
Milford,	13,055	3	0	1	1	–	–	–	–
Adams,	13,026	–	–	–	–	–	–	–	–
Framingham,	12,948	2	0	1	1	–	–	–	–
Weymouth,	12,895	–	–	–	–	–	–	–	–
Watertown,	12,875	4	–	1	1	–	–	–	–
Southbridge,	12,592	1	–	–	–	–	–	–	–
Plymouth,	12,141	–	–	–	–	–	–	–	–
Webster,	11,509	5	2	3	1	1	–	–	–
Methuen,	11,448	0	–	–	–	–	–	–	–
Wakefield,	11,404	4	1	–	–	–	–	–	–
Arlington,	11,187	0	–	–	–	–	–	–	–
Greenfield,	10,427	3	1	2	2	–	–	–	–
Winthrop,	10,132	4	–	2	–	2	–	–	–
Recapitulation.									
Total of reporting towns,	2,524,805	834	200	298	137	74	10	2	4

WEEK ENDING APRIL 15, 1911.

CITIES AND TOWNS.	Population. Census for 1910.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —					
				Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	670,585	243	53	88	35	27	2	1	2
Worcester,	145,986	45	12	14	6	2	–	–	–
Fall River,	119,295	41	22	24	14	3	–	–	4
Lowell,	106,294	37	10	8	2	3	–	–	–
Cambridge,	104,839	39	10	16	6	5	2	–	1
New Bedford,	96,652	33	8	9	3	5	–	–	–
Lynn,	89,336	21	5	7	7	–	–	–	–
Springfield,	88,926	25	8	8	4	–	1	–	–
Lawrence,	85,892	26	13	14	6	1	–	–	2
Somerville,	77,236	17	2	3	2	1	–	–	–
Holyoke,	57,730	17	6	4	2	2	–	–	–
Brockton,	56,878	14	3	3	3	–	–	–	–
Malden,	44,404	16	2	6	3	1	–	–	–
Haverhill,	44,115	15	2	4	2	1	–	–	–
Salem,	43,697	21	3	5	2	3	–	–	–
Newton,	39,806	3	1	1	1	–	–	–	–
Fitchburg,	37,826	11	2	4	3	1	–	–	–
Taunton,	34,259	14	3	4	1	1	–	–	–
Everett,	33,484	10	3	2	–	–	1	1	–
Quincy,	32,642	8	0	3	1	2	–	–	–
Chelsea,	32,452	13	–	3	2	1	–	–	–
Pittsfield,	32,121	8	2	–	–	–	–	–	–
Waltham,	27,834	3	0	1	1	–	–	–	–
Brookline,	27,792	8	1	–	–	–	–	–	–
Chicopee,	25,401	3	1	–	–	–	–	–	–
Gloucester,	24,398	4	2	–	–	–	–	–	–
Medford,	23,150	5	3	–	–	–	–	–	–
North Adams,	22,019	8	5	2	1	–	–	–	–
Northampton,	19,431	9	2	3	–	2	1	–	–
Beverly,	18,650	2	–	–	–	–	–	–	–
Revere,	18,219	5	–	–	–	–	–	–	–
Leominster,	17,580	7	1	2	2	–	–	–	–
Attleborough,	16,215	3	1	–	–	–	–	–	–
Westfield,	16,044	8	1	6	2	4	–	–	–
Peabody,	15,721	–	–	–	–	–	–	–	–
Melrose,	15,715	4	–	–	–	–	–	–	–
Hyde Park,	15,507	5	2	–	–	–	–	–	–
Woburn,	15,308	2	2	1	1	–	–	–	–
Newburyport,	14,949	3	2	1	–	–	–	–	–
Gardner,	14,699	7	5	5	2	1	–	–	–
Marlborough,	14,579	7	1	2	1	1	–	–	–
Clinton,	13,075	1	–	–	–	–	–	–	–
Milford,	13,055	6	1	1	1	–	–	–	–
Adams,	13,026	8	3	1	–	–	–	–	–
Framingham,	12,948	1	0	–	–	–	–	–	–
Weymouth,	12,895	–	–	–	–	–	–	–	–
Watertown,	12,875	5	1	–	–	–	–	–	–
Southbridge,	12,592	0	–	–	–	–	–	–	–
Plymouth,	12,141	–	–	–	–	–	–	–	–
Webster,	11,509	5	0	–	–	–	–	–	–
Methuen,	11,448	3	–	1	1	–	–	–	–
Wakefield,	11,404	5	2	4	1	1	–	–	–
Arlington,	11,187	2	–	–	–	–	–	–	–
Greenfield,	10,427	3	–	3	2	1	–	–	–
Winthrop,	10,132	2	–	1	1	–	–	–	–
Recapitulation.									
Total of reporting towns,	2,565,623	811	206	263	121	69	7	2	9

WEEK ENDING APRIL 22, 1911.

CITIES AND TOWNS.	Population. Census for 1910.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM— Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	670,585	258	75	101	40	26	6	1	1
Worcester,	145,986	41	9	12	10	1	–	–	–
Fall River,	119,295	50	23	27	12	4	1	–	1
Lowell,	106,294	25	6	10	8	2	–	–	–
Cambridge,	104,839	42	11	15	6	1	1	–	–
New Bedford,	96,652	36	15	13	7	2	1	–	–
Lynn,	89,336	23	5	2	1	1	–	–	–
Springfield,	88,926	28	4	5	4	–	–	–	–
Lawrence,	85,892	23	12	12	6	2	–	–	1
Somerville,	77,236	21	3	5	3	2	–	–	–
Holyoke,	57,730	17	7	5	4	1	–	–	–
Brockton,	56,878	7	1	1	1	–	–	–	–
Malden,	44,404	15	4	4	2	–	–	1	–
Haverhill,	44,115	14	2	5	2	1	1	–	–
Salem,	43,697	19	5	4	1	2	–	–	–
Newton,	39,806	9	2	2	2	–	–	–	–
Fitchburg,	37,826	15	5	8	1	2	–	1	–
Taunton,	34,259	13	1	1	1	–	–	–	–
Everett,	33,484	12	–	3	1	2	–	–	–
Quincy,	32,642	5	3	1	–	1	–	–	–
Chelsea,	32,452	17	2	3	1	1	–	–	–
Pittsfield,	32,121	14	–	3	1	–	–	–	–
Waltham,	27,834	5	2	2	1	1	–	–	–
Brookline,	27,792	5	–	2	1	1	–	–	–
Chicopee,	25,401	12	5	4	1	–	2	–	–
Gloucester,	24,398	4	1	–	–	–	–	–	–
Medford,	23,150	4	1	1	1	–	–	–	–
North Adams,	22,019	10	4	–	–	–	–	–	–
Northampton,	19,431	11	3	2	–	1	1	–	–
Beverly,	18,650	11	1	1	1	–	–	–	–
Revere,	18,219	5	1	2	2	–	–	–	–
Leominster,	17,580	2	–	–	–	–	–	–	–
Attleborough,	16,215	8	3	3	3	–	–	–	–
Westfield,	16,044	10	–	5	3	2	–	–	–
Peabody,	15,721	–	–	–	–	–	–	–	–
Melrose,	15,715	0	–	–	–	–	–	–	–
Hyde Park,	15,507	5	1	–	–	–	–	–	–
Woburn,	15,308	5	1	3	1	2	–	–	–
Newburyport,	14,949	3	1	3	–	1	–	–	–
Gardner,	14,699	6	1	2	–	1	–	–	–
Marlborough,	14,579	4	1	–	–	–	–	–	–
Clinton,	13,075	6	1	–	–	–	–	–	–
Milford,	13,055	7	0	2	2	–	–	–	–
Adams,	13,026	2	2	2	1	1	–	–	–
Framingham,	12,948	2	0	–	–	–	–	–	–
Weymouth,	12,895	–	–	–	–	–	–	–	–
Watertown,	12,875	5	1	–	–	–	–	–	–
Southbridge,	12,592	6	3	1	1	–	–	–	–
Plymouth,	12,141	–	–	–	–	–	–	–	–
Webster,	11,509	4	0	2	–	–	–	–	–
Methuen,	11,448	3	–	–	–	–	–	–	–
Wakefield,	11,404	3	–	1	1	–	–	–	–
Arlington,	11,187	3	–	–	–	–	–	–	–
Greenfield,	10,427	6	3	2	1	–	–	–	1
Winthrop,	10,132	1	–	1	1	–	–	–	–

Recapitulation.

Total of reporting towns,	2,565,623	862	231	283	135	61	13	3	4

WEEK ENDING APRIL 29, 1911.

CITIES AND TOWNS.	Population. Census for 1910.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM— Principal Infectious Disease.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	670,585	206	57	81	32	19	2	–	2
Worcester,	145,986	43	8	12	7	2	1	–	–
Fall River,	119,295	42	21	26	13	3	1	–	4
Lowell,	106,294	43	12	16	9	4	–	–	–
Cambridge,	104,839	28	8	9	3	2	–	–	1
New Bedford,	96,652	32	18	13	9	3	–	–	–
Lynn,	89,336	29	5	7	4	2	–	–	–
Springfield,	88,926	31	5	9	6	1	–	–	–
Lawrence,	85,892	24	8	11	4	3	–	–	1
Somerville,	77,236	22	3	5	1	2	1	–	–
Holyoke,	57,730	16	3	2	1	1	–	–	–
Brockton,	56,878	18	3	6	3	2	1	–	–
Malden,	44,404	15	3	8	1	2	–	1	–
Haverhill,	44,115	11	4	5	3	1	1	–	–
Salem,	43,697	8	2	3	2	1	–	–	–
Newton,	39,806	2	–	2	1	–	–	–	–
Fitchburg,	37,826	9	3	4	3	–	–	–	–
Taunton,	34,259	14	1	4	3	1	–	–	–
Everett,	33,484	6	–	2	2	–	–	–	–
Quincy,	32,642	6	1	–	–	–	–	–	–
Chelsea,	32,452	13	3	4	1	1	–	–	–
Pittsfield,	32,121	7	–	2	1	1	–	–	–
Waltham,	27,834	10	3	4	3	–	–	–	–
Brookline,	27,792	6	–	2	2	–	–	–	–
Chicopee,	25,401	11	1	4	1	3	–	–	–
Gloucester,	24,398	5	2	1	–	1	–	–	–
Medford,	23,150	7	–	2	1	–	1	–	–
North Adams,	22,019	7	2	4	2	2	–	–	–
Northampton,	19,431	7	1	4	–	4	–	–	–
Beverly,	18,650	3	–	1	1	–	–	–	–
Revere,	18,219	6	4	3	2	–	–	–	–
Leominster,	17,580	5	–	–	–	–	–	–	–
Attleborough,	16,215	3	1	1	–	1	–	–	–
Westfield,	16,044	7	–	4	1	3	–	–	–
Peabody,	15,721	–	–	–	–	–	–	–	–
Melrose,	15,715	3	–	–	–	–	–	–	–
Hyde Park,	15,507	1	0	–	–	–	–	–	–
Woburn,	15,308	3	1	1	1	–	–	–	–
Newburyport,	14,949	7	1	2	1	1	–	–	–
Gardner,	14,699	3	–	1	1	–	–	–	–
Marlborough,	14,579	7	1	2	–	1	–	1	–
Clinton,	13,075	8	1	3	–	2	–	–	–
Milford,	13,055	2	0	2	2	–	–	–	–
Adams,	13,026	0	–	–	–	–	–	–	–
Framingham,	12,948	3	0	–	–	–	–	–	–
Weymouth,	12,895	–	–	–	–	–	–	–	–
Watertown,	12,875	4	0	2	1	1	–	–	–
Southbridge,	12,592	8	3	3	1	–	1	–	–
Plymouth,	12,141	–	–	–	–	–	–	–	–
Webster,	11,509	5	1	2	2	–	–	–	–
Methuen,	11,448	4	2	2	–	1	1	–	–
Wakefield,	11,404	2	1	–	–	–	–	–	–
Arlington,	11,187	3	–	–	–	–	–	–	–
Greenfield,	10,427	2	–	1	1	–	–	–	–
Winthrop,	10,132	2	–	1	1	–	–	–	–
Recapitulation.									
Total of reporting towns,	2,365,623	769	198	283	133	64	10	2	8

WEEKLY RETURNS OF DEATHS FROM CERTAIN INFECTIOUS DISEASES.

Deaths from Infectious Diseases not specifically mentioned in above Tables during the Weeks of April 1, 8, 15, 22 and 29, 1911.

Disease.	Place.	Week ending — Apr. 1.	Apr. 8.	Apr. 15.	Apr. 22	Apr. 29.
Cerebro-spinal meningitis,	Boston,	1	1	–	–	1
	Cambridge,	–	–	–	1	–
	Fitchburg,	–	–	–	2	1
	Lowell,	–	–	–	–	1
	Malden,	–	–	1	–	–
	Newburyport,	–	–	–	1	–
	Worcester,	1	3	1	–	1
Scarlet fever,	Boston,	2	2	1	5	2
	Brockton,	1	–	–	–	–
	Fall River,	–	–	–	1	–
	Haverhill,	–	–	–	1	–
	Newton,	–	1	–	–	–
	Newburyport,	–	–	1	–	–
	Worcester,	–	1	–	–	–
Whooping cough,	Adams,	1	–	1	–	–
	Boston,	3	5	2	1	4
	Cambridge,	1	2	–	3	–
	Chelsea,	–	–	–	–	1
	Everett,	–	1	–	–	–
	Fall River,	–	1	2	2	1
	Fitchburg,	–	–	–	2	–
	Gardner,	1	–	1	–	–
	Lawrence,	4	–	1	–	–
	Lowell,	2	–	–	–	–
	Lynn,	–	–	–	–	1
	North Adams,	–	–	1	–	–
	Pittsfield,	–	–	–	1	–
	Salem,	–	1	–	–	–
	Springfield,	–	–	–	–	1
Erysipelas,	Boston,	1	4	1	–	2
	Brockton,	1	–	–	–	–
	Cambridge,	1	–	–	–	–
	Chelsea,	–	–	–	1	–
	Lowell,	–	–	1	–	–
	Somerville,	1	1	–	–	–
	Springfield,	–	1	–	–	–
	Worcester,	–	–	2	–	–

DEATHS FROM INFECTIOUS DISEASES, ETC. — *Concluded.*

DISEASE.	Place.	WEEK ENDING —				
		Apr. 1.	Apr. 8.	Apr. 15.	Apr. 22.	Apr. 29.
Tuberculosis other than pulmonary.	Boston,	2	5	4	6	2
	Cambridge,	1	1	1	–	1
	Chelsea,	–	–	–	–	1
	Fall River,	1	–	–	–	–
	Gardner,	–	1	–	–	–
	Haverhill,	1	–	1	–	–
	Holyoke,	–	2	–	–	–
	Lawrence,	1	1	–	1	–
	Lowell,	–	–	2	–	2
	Malden,	–	–	–	–	1
	Medford,	1	–	–	–	–
	New Bedford,	–	–	1	–	–
	Newton,	–	–	–	–	1
	Revere,	–	–	–	–	1
	Salem,	–	–	–	1	–
	Somerville,	–	2	–	–	1
	Springfield,	1	–	2	1	–
	Taunton,	–	1	–	–	–
	Wakefield,	–	1	–	–	–
	Waltham,	–	1	–	–	1
	Worcester,	2	1	3	1	–
Influenza,	Boston,	5	3	1	2	–
	Cambridge,	1	–	–	1	1
	Lawrence,	–	–	–	–	1
	Newburyport,	–	–	–	1	–
	Springfield,	–	–	–	–	1
	Taunton,	–	1	–	–	–
	Webster,	–	1	–	2	–
Meningitis other than cerebro-spinal.	Clinton,	1	–	–	–	–
	Malden,	–	–	–	–	2
	Wakefield,	–	–	2	–	–
Anterior poliomyelitis,	Pittsfield,	–	–	–	1	–

WEEKLY RETURNS OF CASES OF INFECTIOUS DISEASES.

Cases of Infectious Diseases reported during the Weeks of April 1, 8, 15, 22 and 29, 1911.

[Under the provisions of section 52 of chapter 75 of the Revised Laws.]

	Week ending—					
	Apr. 1.	Apr. 8.	Apr. 15.	Apr. 22.	Apr. 29.	Total.
Diphtheria,	88	113	110	128	105	544
Measles,	359	491	629	582	699	2760
Scarlet fever,	90	166	145	142	156	699
Typhoid fever,	24	20	28	14	29	115
Tuberculosis, pulmonary,	89	178	108	137	144	656
Tuberculosis other than pulmonary,	–	2	–	1	–	3
Cerebro-spinal meningitis,	2	4	2	7	8	23
Meningitis other than cerebro-spinal,	1	2	–	1	3	7
Whooping cough,	63	110	100	60	118	451
Varicella,	14	43	60	27	55	199
Erysipelas,[1]	–	1	3	1	1	6
Mumps,[1]	15	12	16	26	10	79
Ophthalmia neonatorum,	22	30	6	23	31	112
Anterior poliomyelitis,	1	1	–	5	3	10
Trachoma,	1	–	2	–	1	4
Smallpox,	–	–	–	–	1	1

[1] Erysipelas and mumps are not diseases notifiable under section 52 of chapter 75 of the Revised Laws. The figures concerning these diseases are, therefore, incomplete.

MONTHLY REPORT ON INSPECTION OF FOOD AND DRUGS.

The following summary presents the results of the examination of food and drugs made by the State Board of Health during the month of April, 1911:—

Articles examined.	Number found to be of Good Quality.	Number adulterated or varying from the Legal Standard.	Total.	Articles examined.	Number found to be of Good Quality.	Number adulterated or varying from the Legal Standard.	Total.
Baking powder,	2	–	2	Grape juice,	1	–	1
Butter,	1	–	1	Honey,	2	–	2
Canned fish,	1	–	1	Jams and jellies,	2	–	2
Canned vegetables,	1	–	1	Lard,	1	1	2
Cider,	0	1	1	Maple sugar,	15	3	18
Clams,	1	–	1	Maple syrup,	3	–	3
Oysters,	1	–	1	Meat products:—			
Cocoa,	1	–	1	Hamburg steak,	1	–	1
Coffee extract,	1	–	1	Mince meat,	1	–	1
Confectionery,	2	–	2	Sausages,	12	10	22
Cream,	15	5	20	Tripe,	2	–	2
Drugs,	78	15	93	Milk,	367	98	465
Eggs (frozen),	4	41	45	Olive oil,	5	–	5
Flavoring extracts:—				Pickles,	1	–	1
				Proprietary food,	1	–	1
Anise,	1	–	1	Salad dressing,	3	–	3
Lemon,	5	2	7	Spices,	5	–	5
Lime,	0	1	1				
Orange,	0	2	2	Total,	545	183	728
Peppermint,	1	1	2				
Vanilla,	8	3	11				

The samples of drugs found to be adulterated were: alchohol, camphor liniment, tincture arnica, nux vomica, essence peppermint and several proprietary medicines.

The cities and towns in which samples were collected were: Ashburnham, Attleborough, Boston, Chicopee, Dedham, Everett, Fall River, Fitchburg, Franklin, Gardner, Greenfield, Gloucester, Ipswich, Lawrence, Lowell, Malden, Marlborough Medford, Melrose, Montague, Natick, New Bedford, Newton, North Attleborough, Northborough, Palmer, Peabody, Pittsfield, Rockport, Rockland, Salem, Somerville, Springfield, Stoughton, Waltham, Westfield, Westborough, West Hanover, West Springfield, Weymouth and Winchester.

PROSECUTIONS FOR VIOLATIONS OF THE LAW RELATING TO FOOD AND DRUGS.

Thirteen convictions were secured during the month of April, 1911, for selling adulterated food and drugs as follows:—

No.	Name of Defendant.	Place.	Character of Article sold.
1	Daniel Capobianco,	Roxbury,	Cider contained benzoic acid.
2	James McAuley,	Roxbury,	Denatured alcohol.
3	Daniel Capobianco,	Roxbury,	Maple sugar.
4	Charles Bingeil,	Newton,	Milk (total solids, 11.18)[1] (appended).
5	William S. Jones,	Pittsfield,	Milk (total solids, 11.46).[2]
6	Daniel W. Kelly,	Boston,	Sausage (tomato).[3]
7	Fred B. Rand,	Boston,	Sausage (pork).
8	James J. Radican,	South Boston,	Sausage (pork).
9	Jerome Sullivan,	South Boston,	Sausage (pork).
10	Samuel B. Walter,	Roxbury,	Sausage (pork).
11	Abraham Winer,	Roxbury,	Sausage (liver).
12	John F. Zajieck,	Lawrence,	Sausage (pork).
13	The Fleischman Company,	Boston,	Vinegar.

[1] Skimmed. [2] Watered. [3] Contained cereal.

Fines imposed, $325.

Number of Sample.	Character of Sample.	Name of Manufacturer, Wholesaler or Producer.	Results of Analyses.
14060	Vino Sangre Medicinal Wine,	S. S. Pierce Company, Boston, Mass.,	Contained 19.68 per cent. alcohol.
14289	Providence Vanilla Flavor,	Providence Extract Company, Providence, R. I.,	Contained coumarin.
q 6803	Cream,	John D. Powell, Woonsocket, R. I.,	Preserved with formaldehyde.
q 6804			Preserved with formaldehyde.
q 6806			Preserved with formaldehyde.
q 6810		Walter G. Kent, Woonsocket, R. I.,	Preserved with formaldehyde.
q 6816			Preserved with formaldehyde.
14174	Milk,	William Golden, North Attleborough, Mass.,	Total solids, 12.72 per cent.; fat, 4.80 per cent.; contained added water.
q 6711	Milk,	Walter Lovell, Hanover, Mass.,	Total solids, 11.34 per cent.; fat, 4.00 per cent.; contained added water.
q 6712			Total solids, 7.90 per cent.; fat, 3.00 per cent.; contained added water.
q 6713			Total solids, 9.76 per cent.; fat, 4.30 per cent.; contained added water.
14271	Milk,	William Golden, North Attleborough, Mass.,	Total solids, 11.40 per cent.; fat, 3.65 per cent.; contained added water.
8364 N	Milk,	Orlando A. Foster, Westford, Mass.,	Total solids, 10.66 per cent.; fat, 3.20 per cent.; contained added water.
8366 N			Total solids, 10.70 per cent.; fat, 3.30 per cent.; contained added water.
8368 N			Total solids, 10.36 per cent.; fat, 3.30 per cent.; contained added water.
8370 N			Total solids, 10.40 per cent.; fat, 3.40 per cent.; contained added water.
q 6760	Milk,	Edward J. Gorman, North Abington, Mass.,	Total solids, 10.20 per cent.; fat, 3.10 per cent.; contained added water.
q 6718	Milk,	Samuel E. Stone, Ashburnham, Mass.,	Total solids, 11.58 per cent.; fat, 3.60 per cent.; contained added water.
q 6719			Total solids, 11.00 per cent.; fat, 3.40 per cent.; contained added water.
q 6720		Nathan Stone, Ashburnham, Mass.,	Total solids, 11.56 per cent.; fat, 3.60 per cent.; contained added water.
q 6721			Total solids, 11.48 per cent.; fat, 3.70 per cent.; contained added water.

Number of Sample.	Character of Sample.	Name of Manufacturer, Wholesaler or Producer.	Results of Analyses.
q 6722	Milk,	Samuel E. Stone, Ashburnham, Mass.	Total solids, 10.66 per cent.; fat, 3.40 per cent.: contained added water.
q 6723			Total solids, 11.54 per cent.; fat, 3.60 per cent.; contained added water.
q 6724			Total solids, 11.14 per cent.; fat, 3.30 per cent.: contained added water.
q 6725			Total solids, 11.60 per cent.; fat, 4.30 per cent.; contained added water.
q 6726			Total solids, 11.00 per cent.; fat, 3.80 per cent.: contained added water.
q 6727			Total solids, 11.70 per cent.; fat, 3.60 per cent.; contained added water.
q 6728			Total solids, 11.70 per cent.; fat, 4.00 per cent.; contained added water.
q 6729			Total solids, 11.54 per cent.; fat, 3.80 per cent.: contained added water.
q 6730			Total solids, 11.30 per cent.; fat, 3.70 per cent.; contained added water.
q 6731		Nathan Stone, Ashburnham, Mass.	Total solids, 11.64 per cent.; fat, 4.20 per cent.: contained added water.
q 6732			Total solids, 11.90 per cent.; fat, 4.00 per cent.; contained added water.
q 6733			Total solids, 11.54 per cent ; fat. 3.30 per cent.; contained added water.
q 6734			Total solids, 11.46 per cent,; fat, 3.80 per cent.; contained added water.
q 6735			Total solids, 11.56 per cent.; fat, 3.60 per cent.; contained added water.
q 6736			Total solids, 11.60 per cent.; fat, 3.60 per cent.; contained added water.
q 6737			Total solids, 11.40 per cent.; fat, 5.00 per cent.; contained added water.
q 6738			Total solids, 11.54 per cent.; fat, 3.60 per cent.; contained added water.
q 6740			Total solids, 12.46 per cent.; fat, 3.80 per cent.; contained added water.

INSPECTION OF DAIRIES.

During the month of April, 1911, 273 dairies were examined in the following places: —

Place.	Number examined.	Number found to present no Objectionable Features.	Per Cent.	Number concerning which Letters were sent.	Per Cent.
Amherst,	5	2	40.00	3	60.00
Second inspection,	10	5	50.00	5	50.00
Ashby,	29	21	72.41	8	27.59
Second inspection,	1	1	100.00	–	–
Third inspection,	1	1	100.00	–	–
Belchertown,	10	6	60.00	4	40.00
Second inspection,	5	3	60.00	2	40.00
Third inspection,	5	5	100.00	–	–
Beverly,	6	3	50.00	3	50.00
Second inspection,	28	22	78.57	6	21.43
Fourth inspection,	1	1	100.00	–	–
Chicopee,	2	1	50.00	1	50.00
Third inspection,	4	3	75.00	1	25.00
Fourth inspection,	1	–	–	1	100.00
Granby,	14	3	21.43	11	78.57
Second inspection,	2	2	100.00	–	–
Third inspection,	25	19	76.00	6	24.00
Hadley,	5	1	20.00	4	80.00
Holyoke,	–	–	–	–	–
Second inspection,	1	1	100.00	–	–
Third inspection,	18	12	66.67	6	33.33
Medway,	4	3	75.00	1	25.00
Second inspection,	13	9	69.23	4	30.77
Phillipston,	3	2	66.67	1	33.33
South Hadley,	2	–	–	2	100.00
Third inspection,	10	5	50.00	5	50.00
Sunderland,	3	1	33.33	2	66.67
Westminster,	10	6	60.00	4	40.00
Second inspection,	5	4	80.00	1	20.00

Total number of dairies examined,	273
Number found to be free from objectionable conditions,	142
Number concerning which letters were sent,	81
Total number of conditions to which attention was called,	204
Percentage of dairies which passed inspection,	52.01

In addition to the above, 50 dairies were visited at which the sale of milk had been discontinued.

The names of the owners of the dairies found to be worthy of commendation follow: —

Amherst.

Class B.

Busby, E.
Cowles, Walter D.*
Eastman, E. B.*
Sanderson, W. H.*
Stiles, Charles E.*
Whitcomb, R. H.
Wiley, Charles E.*

* Second inspection.

Ashby.

Class B.

Brooks, I. H. & Sons
Drew, Nathaniel
Erickson, Nils
Farwell, Herbert
Foster, Jesse
French, Irving
Godding, J. Edward *
Green, Samuel
Heywood, A. I.
Huckins, C. W.
Kayalain, John
Mayo, L. W.
Page, L.
Pillsbury, Frank
Piper, J. A.
Robbins, Fred
Roberts Bros. ‡
Ross, J. W.
Sallinen, John
Simons, F. P.
Wetherbee, Anson
White, Howard A.
Willard, A. W.

Belchertown.

Class B.

Beauregard, Frank
Belchertown Town Farm ‡ †
Bissell, Martin *
Brown, Peter ‡
Clough, William ‡ †
Engleman, Otto P.
Farley, Leon
Giroux, Louis * †
Goodale, F. D.
Lamson, H. M. † ¶
Marcel, Frank
McKillop, Henry ‡ ¶
Ruel, Fred ‡
Shumway, E. F. *

Beverly.

Class A.

Caldwell, Charles E. * †
Gould Bros. § †
Haskell, Miss A. M. * †

Class B.

Avery Bros. *
Cole, Samuel *
Cunningham, H. *
Day, S. A. *
Dodge, Alna *
Dodge, Andrew *
Dodge, Joshua * †
Edwards, Frank * †
Edwards, Justin W.
Fielder, George *
Forster Bros. * †
Foster, Arthur * †
Foster, John H. *
Mason, Charles A. * †
Parsons, George A.
Raymond, Estate of John W. *
Riva, Charles E. * †
Stanley, W. W. *
Swift, Adna J. *
Trask, Joseph W. *
Tucker, George H.
Wales, George R. * †
Woodbury, John E. * †

Chicopee.

Class B.

Blanchard, John ‡ ¶
Perry, S. & J.
Schauer, W. J. ‡
Shea, Estate of Patrick ‡

Granby.

Class B.

Barnes, Dexter R. ‡ ¶
Benson, W. S. ‡ ¶
Bryant, W. E.
Cleveland, H. A.
Crevier, Rev. Charles ‡ ¶
Gagnon, Joseph ‡
Ferry, Clifford W. ‡ ¶
French, R. A. * †
Giroux, C.
Goldthwait, Charles H. ‡
Graves, Frank ‡
Ingham, J. L. *
Kellogg, Nelson S. ‡ ¶
Lyman, F. W.
McGrath, M. F. ‡ ¶
Moody, Henry H. ‡ ¶
Moody, William L. ‡
Mungon, B. Jr. ‡ ¶
Nash, Charles E. ‡ †
Nutting, Dwight S. ‡ ¶
Prentiss, M. P. ‡ †
Robert, E. ‡
Taylor, Horace S. ‡ †
Taylor, Leon W. ‡ ¶

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* Second inspection. † Reported favorably on first inspection. ‡ Third inspection.
§ Fourth inspection. ¶ Reported favorably on second inspection.

Hadley.

Class B.

Field, A. W.

Holyoke.

Class A.

Goodyear, George L. ‡ †
Whiting, Estate of William ‡ †

Class B.

Abbott, W. H. ‡
Baldwin, W. C. P. ‡ †
Ball, James A. ‡ †
Jenks, Estate of W. W. ‡ ¶
Marcil, Francois * †
Martin, Adolph F. ‡
Moss, Frank ‡
Rand, A. J. ‡
Schauer, David C. ‡ ¶
Shea, Patrick F. ‡ ¶
Tatro, Albert ‡

Medway.

Class B.

Clark, T. W. & Co.*
Connelly, Patrick *
Fowler A. M. *
Kamparse, A.
Manuta, A.
Newton, Harry
Orenstein, J.*
Pottle, C. L.*
Smith, A. L.*
Smyth, James *
Tracey, T.*
Wight, George L.*

Phillipston.

Class B.

Rounds, George E.
Farrington, A. W.

South Hadley.

Class B.

Dyer, Thomas A. ‡
Gagne, A. ‡ †
Judd, W. S. & Son ‡ ¶
Menard, William ‡
Strong, Fred ‡

Sunderland.

Class B.

Smith, George P.

Westminster.

Class B.

Carter, W. H.*
Hartnett, William E.
Kahkold, P.*
Koskinen, V.*
Laws, W. H.
Marchand, Joseph
Merriam, E. H.
Merritt, M. D.* †
Page, Porter
Vieweg, Ernest

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* Second inspection. † Reported favorably on first inspection. ‡ Third inspection.
¶ Reported favorably on second inspection.

SANITARY CONDITIONS IN FOUNDRIES IN MASSACHUSETTS.

By the Assistant to the Secretary of the Board.

Two hundred and nine foundries, or all concerning which the Board had any knowledge, were inspected during 1910. Of this number, 163 establishments employed 10 or more workers and came under the provisions of section 102, chapter 514, Acts of 1909, while 46 employed less than 10 workers. A variety of processes are carried on in foundries. These processes are of greater or less importance from a hygienic standpoint inasmuch as they expose the workmen to extremes of temperature, to dust and to more or less irritating gases and vapors.

Extremes of Temperature. — Many of the foundries were not properly heated, and during the cold days some of the workmen were said to experience considerable discomfort from the cold. In the immediate vicinity of the furnace, however, or during the time that the metal was poured, the heat was apt to be excessive.

Gases and Vapors. — In some foundries, in one of the districts, open coal fires were observed not connected with any chimney or drafts, and all the gases from the burning coal escaped into the foundry. In some iron foundries it was observed that in repairing the fire-clay lining of the pots, in which the molten iron is carried, wood was burned in them in order to dry the clay. The smoke from the burning wood escaped into the workroom.

In foundries where brass or composition is cast, employees are exposed to fumes from the zinc which enters into the composition of these metals. The metals are usually melted in fire pots which are most frequently below the floor. These are covered with iron covers so that during the melting few or no gases escape. In the foundries where the metal was melted the blast furnaces were found properly hooded to carry off the fumes. When the metal is ready for pouring the crucibles are lifted out by means of long iron holders and are carried by two men to the molds where it is poured. It is during this process that the zinc volatilizes and is given off as dense gray fumes, which, on being cooled by the air of the room, precipitate into fine gray powdered flakes which fill the room and are unavoidably inhaled by the workers. Brass casters, as well as men who cast composition containing a high per cent. of zinc, frequently suffer from what is known as "brass chills." Those are more apt to suffer who are not used to this kind of work or who return to it after an intervening period during which such work was

not done. The "chills" are apt to occur on damp, cloudy days, when the fumes, generated during casting, are not readily carried out of the foundry. The "chills" usually come on in the late afternoon or on reaching home in the evening. The worker experiences an irritation of the throat, a metallic taste in the mouth, and pains all over his body, as if suffering from an attack of "la grippe." Shortly after the "chills" set in they occur intermittently for a few hours and then terminate in a profuse sweat. Most often the worker feels well enough in the morning to return to work. Occasionally, however, a man may have to stay out of work for a day or two.

In iron and steel foundries there are no metallic vapors, but gases are generated when the metal is poured into the mold and when the casting is removed from the mold. The gases generate in the following manner: the cores which are made from different grades of sand are mixed with a "core binder" consisting of flour, sour beer, molasses, starch or some other sticky substance, to hold the sand together. The cores are often covered with a thin layer of powdered coal, so that when the metal is poured into the mold the layer of coal is ignited and a thin layer of gas is formed, preventing the metal from penetrating into the core and forming an uneven surface. The gases are generated, therefore, from the burning of the organic substances used as binders and from the layers of powdered coal. In addition to these gases there is considerable steam generated when the casting is dumped out into the mold, for the sand from which the mold is made is moist.

In steel casting men were observed to wear smoked spectacles, often two pair to protect the eyes from the intense heat, from the brilliancy of the molten steel, and from the sputtering of the metal.

Dust. — Great quantities of sand are used in the making of molds and cores. Floors, benches and the hands of operatives were covered with this sand dust.

The dry sand from which the cores are made is sifted on a fine wire netting, — a process which gives rise to considerable fine dust. This process, however, is not carried on to any extent, but is done, for the most part, several times a week for a few hours at a time. In one foundry the dust generated was decidedly objectionable, and upon the suggestion of the State Inspector of Health a covered sifter was provided to remove this source of annoyance.

The various processes used in the cleaning of castings are all dust producing. Castings are cleaned in tumbling mills, by sand blasts, emery wheels, or by hand with wire brushes. The tumbling mills are barrel-like chambers in which the castings are placed together with small pieces of scrap iron. After the doors are closed power is applied and the mills

are set in a rotary motion. From the constant action of the castings upon each other and upon the scrap iron the surfaces are smoothed and the castings are cleaned of any sand which may be adherent. The dust generated by this process was, in most foundries, removed by exhausts. Moreover, these mills were usually located in some corner away from the workmen who did not have to attend to them during operation. The emery wheels on which the castings were cleaned were in many cases provided with hoods and exhausts. In foundries where dust-removal devices did not exist the State Inspectors of Health issued orders for their installation as is indicated below.

A serious exposure to fine dry sand was observed in those foundries where sand blasts were in use for cleaning the castings. This process, which is usually carried on in a room separated from the rest of the foundry, consists of playing a stream of fine dry sand, by means of compressed air, upon the castings. So great is the force of the sand stream that the steel nozzle which is used is quickly cut through. In some foundries exhaust fans and hoods were provided to carry off the dust, although in spite of this precaution the rooms were so filled with dust while the sand blasts were in operation that objects could not be clearly seen. When doing this work the workmen usually wore masks to protect the eyes. These masks, however, did not prevent the inhalation of dust, which appeared to enter the respiratory passages with a good deal of force. In one factory a man was observed to wear a helmet with a tubing through which fresh air was supplied from the outside. In another foundry such a helmet was provided but the man did not use it "as it was too much bother to put it on and take it off." The length of time a man can keep at this work is said to be short; in about a year or a year and a half he begins to show the effects of the work and is forced to leave.

In the Fall River District the State Inspector of Health made physical examinations of 320 molders, with the following results: —

Suffering from disease of the lungs, *e.g.,* bronchitis, asthma, emphysema, 41, or 12.8 per cent.

Suffering from disease of the heart, *e.g.,* valvular disease or dilation, 39, or 12.2 per cent.

Suffering from diseases of the kidneys, 23, or 7.2 per cent.

The total number of workers in ill health was 103, or 32.2 per cent. Their ages ranged from forty-five to seventy-two years.

Metallic Poisoning. — Besides the zinc poisoning above referred to among brass and composition workers, one case of chronic lead poisoning was found in a foundry where old lead was being refined. The man stated that he had been at this work for six years; he suffered frequently from

severe colics and from obstinate constipation. A lead line at the junction of the gums and teeth could be observed.

In another foundry where white metal was being cast one man suffered from chronic antimony poisoning.

Other Influences. — Another influence prejudicial to the health of foundry workers was observed in some of the core rooms. In spraying the binder upon the outside of the core men use blow pipes. While each man is supplied with an individual pipe, these are frequently interchanged, and a man may put in his mouth a pipe previously used by some one else without cleaning it.

Cleanliness. — Cleanliness in foundries is rather difficult to define. From the nature of the work cleanliness resolves itself to a question of orderliness, and, above all, as to whether or not the building is properly constructed, with suitable floors, either of concrete, brick or other material, which can be kept clean. In all foundries where the cleanliness was found poor the reason was due in large measure to the unfit and dilapidated condition of the building. In many of the buildings there was no covering on the earthen floor. Combined with the usually prevailing disorder, this condition tended to give an impression of untidiness and dismalness. Little improvement can be hoped for in these old and dilapidated buildings. In a considerable number of foundries conditions as to cleanliness were excellent, considering the nature of the work. These foundries as a rule were connected with manufacturing establishments, and were located in modern buildings. The condition as to cleanliness in the 209 foundries visited was recorded "good" in 158, "fair" in 26 and "poor" in 25.

Light. — While, as a rule, very few foundries appeared to be as well lighted as the best lighted factories, yet, considering the processes that were carried on, the light in many was fairly good. In a considerable number of the foundries the windows were dirty, covered with soot and dust, and, although there was sufficient light for the processes carried on, the workrooms seemed cheerless and dismal. In the largest number of the foundries the light came from the side windows and from the windows in the monitor roofs; in 28 establishments it came from the side only and consequently was poor.

Ventilation. — Ventilation in foundries is generally obtained through the windows. During the casting in those foundries in which ventilation was found fairly adequate the side windows as well as the windows in the monitor roofs and skylights were opened for the gases to escape. Most of the foundries were quite high, and the gases set free during the casting quickly rose to the top, so that the level at which the employees breathed became free from gases in a fairly short time. In the 23

foundries in the State where ventilation was observed to be inadequate, it was noted that the employees did not open the windows or skylights when the casting was carried on. In only 2 establishments in the State was artificial ventilation provided by means of exhaust fans. Ventilation during casting was found good in 128, fair in 58 and poor in 23 establishments.

Washing Facilities and Water-closets. — Men working in foundries are exposed to a great deal of unavoidable dust. The molders and core makers make the molds and cores with sand, and their hands, faces and clothing become soiled. To maintain a reasonable degree of personal cleanliness compatible with health and decency it is necessary that the men be provided with facilities for washing and a room in which they may change their clothing, as is required by section 102, chapter 514, Acts of 1909.

In the 209 foundries inspected in the State, 46 employed less than 10 men and therefore did not come within the provisions of the above section. In the 161 employing 10 or more men, 22 were exempt from the requirement of maintaining a toilet room and a water-closet because such a requirement was impracticable on account of the absence of either a public or a private sewerage system.

Toilets with washing facilities and water-closets with running water were provided in 116 and lacking in 23 foundries. In 14 of the foundries where provisions were made violations of the law were observed either because the toilets were not of sufficient size or the washing facilities were not adequate. In some foundries there was a semblance of complying with the law but the provisions were entirely unsuitable and there was no evidence of their ever being used.

In this connection attention should be called to an objectionable arrangement for washing observed in several foundries, namely, that of providing a trough which is filled up before the hour of leaving work for the use of the workmen in common. In many instances these troughs were so dirty that they were unsuitable for use.

Water-closet arrangements were, as a rule, satisfactory, even in buildings where improper washing facilities were provided.

The law requiring that the water-closet shall be separate from the wash room is one that may cause unnecessary hardship. In many establishments the water-closets communicate directly with the wash rooms. If the closets are kept clean there can be no objection to such an arrangement.

The Use of Washing Facilities by Employees. — The observations made by the State Inspectors of Health in their respective districts relative to the frequency with which employees use washing facilities

provided for them varied. While some of the State Inspectors of Health found that the men washed pretty generally before dinner and before leaving work, others observed small use made of the facilities provided, and men were seen to leave off work at the noon hour and proceed to eat their luncheon with soiled hands, when the sinks with running hot water were not more than 15 feet distant. In some foundries sinks and basins were in evidence in a broken and unsuitable condition; in others, where excellent washing facilities were provided, men were seen using buckets to wash in. In the best establishments many men preferred to hang their coats in the foundry near their benches rather than use the toilet room which was provided.

A great deal of education is still necessary among both employers and employees. The former should realize that the provision of good sanitary conditions is an asset, and increases the efficiency of the worker. He must, therefore, comply with the spirit as well as with the letter of the law and see that the men use properly the facilities provided for them. This is a condition that prevails in the best establishment.

The workman, on the other hand, not only should recognize the dangers to health to which he is exposed at his work, but must learn to utilize to the fullest extent the facilities which the law requires for his protection.

Numerical Data.

Number of foundries visited	209
Foundries employing 10 or more	163
Foundries employing less than 10	46
Complying with section 102, chapter 514, Acts of 1909	93
Violation of above section	47
Foundries with no sewer connection	23

	Orders issued.	Orders complied with.
Cleanliness	8	4
Light	1	1
Ventilation	7	5
Removal of dust	37	27
Proper toilet facilities	49	34
Water-closets	3	2
Drinking water	1	1
	106	74[1]

[1] Of the 32 orders not complied with some are in process of compliance; while others are being followed up by the State Inspectors of Health for enforcement.

Chapter 264, Acts of 1911.

An Act to provide for the licensing and regulation of lying-in hospitals in cities and towns.

Be it enacted, etc., as follows:

Section sixty-two of chapter seventy-five of the Revised Laws, as amended by chapter five hundred and sixty-nine of the acts of the year nineteen hundred and ten, is hereby further amended by inserting after the word "person", in the second line, the words: — body or association of persons, incorporated or unincorporated, whether for a charitable purpose or otherwise, — so as to read as follows: — *Section 62.* The state board of charity may issue a license, subject to revocation by it, to a person, body or association of persons, incorporated or unincorporated, whether for a charitable purpose or otherwise, whom it deems suitable and responsible to establish or keep for two years within a city or town of this commonwealth, a lying-in hospital, hospital ward or other place for the reception, care and treatment of women in labor, if the local board of health shall first certify to the state board of charity that, from its inspection and examination of such hospital, hospital ward or other place aforesaid, the same is suitable for the said purpose. [*Approved April 10, 1911.*

Chapter 274, Acts of 1911.

An Act to provide for post mortem examinations of bodies of persons electrocuted in conformity with the sentence of a court.

Be it enacted, etc., as follows:

Section 1. There shall be a post mortem examination by a medical examiner for the county of Suffolk of the body of every person electrocuted in conformity with the sentence of a court.

Section 2. All acts and parts of acts inconsistent herewith are hereby repealed.

Section 3. This act shall take effect upon its passage. [*Approved April 13, 1911.*

Chapter 278, Acts of 1911.

An Act relative to the establishment of milk distributing stations in cities and certain towns.

Be it enacted, etc., as follows:

The boards of health of cities, and of towns having ten thousand or more inhabitants are hereby authorized, when they deem it advisable for the public health, to establish in such cities and towns stations for the distribution of milk, either free of charge in cases of necessity, or at such charge and under such conditions, rules and regulations as the board may establish; but this act shall not be construed to permit the said boards of health to engage in a general milk business. [*Approved April 13, 1911.*

Chapter 281, Acts of 1911.

An Act to prohibit the use of suction shuttles in factories.

Be it enacted, etc., as follows:

Section 1. It shall be unlawful for any proprietor of a factory or any officer or agent or other person to require or permit the use of suction shuttles, or any form of shuttle in the use of which any part of the shuttle or any thread is put in the mouth or touched by the lips of the operator. It shall be the duty of the state board of health to enforce the provisions of this act.

Section 2. Violations of this act shall be punished by a fine of not less than fifty dollars for each offence.

Section 3. This act shall take effect on the first Monday of May in the year nineteen hundred and twelve; but if the proprietor or manager of a factory shall, in good faith, show to the state board of health sufficient reasons for its inability to comply with the provisions hereof at the time when this act is to take effect, the said board may, in its discretion, grant a reasonable extension of time within which the said factory shall comply with the provisions hereof. [*Approved April 13, 1911.*

Chapter 282, Acts of 1911.

An Act relative to the inspection of jails, houses of corrections, prisons and reformatories.

Be it enacted, etc., as follows:

Section 1. Chapter four hundred and five of the acts of the year nineteen hundred and ten is hereby amended by striking out section one and inserting in place thereof the following: — *Section 1.* The state inspectors of health, in addition to the duties provided for by chapter five hundred and thirty-seven of the acts of the year nineteen hundred and seven, shall annually make such examination of police station houses, lockups, houses of detention and, except in the county of Suffolk, jails, houses of correction, prisons and reformatories as in the opinion of the state board of health may be necessary to ascertain the sanitary condition of the said buildings.

Section 2. Said chapter four hundred and five is hereby further amended by striking out section two and inserting in place thereof the following: — *Section 2.* The state board of health shall make rules for police station houses, lockups, houses of detention, jails, houses of correction, prisons and reformatories, regarding the care and use of drinking cups and of dishes used for food, the care and use of bedding, and the ventilation of the buildings. Such rules may be general or may be applicable to a single building. A copy of such rules as are made applicable to station houses, houses of detention or lockups, shall be sent by the state board of health to the mayor of every city and to the selectmen of every town to which the rules apply; and a copy of such rules as are made applicable to jails, houses of correction, prisons or re-

formatories, shall be sent by said board to the proper authorities. It shall be the duty of the mayors of cities and the selectmen of towns to which the rules relating to station houses, houses of detention or lockups so made apply, and the duty of those in charge of jails, houses of correction, prisons and reformatories, to which the rules so made apply, to see that the rules are enforced. [*Approved April 13, 1911.*

CHAPTER 341, ACTS OF 1911.

AN ACT RELATIVE TO THE SALE OF COCAINE.

Be it enacted, etc., as follows:

Section five of chapter three hundred and eighty-seven of the acts of the year nineteen hundred and ten is hereby amended by striking out said section and inserting in place thereof the following: — *Section 5.* Whoever violates any provision of the foregoing sections shall be punished by a fine of not less than fifty and not more than one thousand dollars, or by imprisonment for not more than one year in the county jail or house of correction, or by both such fine and imprisonment, and whoever is found present as described in section seven of this act shall be punished by a fine of not more than fifty dollars, or by imprisonment for three months in the house of correction. [*Approved April 27, 1911.*

CHAPTER 372, ACTS OF 1911.

AN ACT RELATIVE TO THE ISSUANCE OF SEARCH WARRANTS FOR HYPNOTIC DRUGS AND THE ARREST OF THOSE PRESENT.

Be it enacted, etc., as follows:

SECTION 1. If a person makes complaint under oath to a police, district, or municipal court, or to a trial justice or justice of the peace authorized to issue warrants in criminal cases, that he has reason to believe that opium, morphine, heroin, codeine, cannabis indica, cannabis sativa or any other hypnotic drug or any salt, compound or preparation of said substances is kept or deposited by a person named therein in a store, shop, warehouse, building, vehicle, steamboat, vessel or place other than by a manufacturer or jobber, wholesale druggist, registered pharmacist, registered physician, registered veterinarian, registered dentist, registered nurse, employees of incorporated hospitals or those who are entitled by law to have possession of any of the above mentioned articles, such court or justice, if it appears that there is probable cause to believe that said complaint is true, shall issue a search warrant to a sheriff, deputy sheriff, city marshal, chief of police, deputy marshal, police officer or constable commanding him to search the premises in which it is alleged that such opium, morphine, heroin, codeine, cannabis indica, cannabis sativa or any other hypnotic drug or any salt or compound or preparation of said substances or any preparation containing the same is kept or deposited, and to seize and securely keep the same until final action, and to arrest the person or persons in whose possession it is found, together with all persons present if any of the aforesaid substances is found, and to return the warrant with his doings

thereon, as soon as may be, to a court or trial justice having jurisdiction in the place in which such substance is alleged to be kept or deposited.

SECTION 2. Whoever is so present where any of the aforesaid drugs is found shall be punished by a fine of not more than fifty dollars or by imprisonment in the house of correction for three months.

SECTION 3. Whoever, not being a manufacturer or jobber of drugs, wholesale druggist, registered pharmacist, registered physician, registered veterinarian, registered dentist, registered nurse, or an employee of an incorporated hospital, or otherwise entitled by law to have possession of any of the above mentioned drugs, is found in possession thereof, except by reason of a physician's prescription, shall be punished by a fine of not more than one hundred dollars or by imprisonment for six months in the house of correction. [*Approved April 29, 1911.*

CHAPTER 381, ACTS OF 1911.

AN ACT TO PROVIDE FOR THE INSPECTION AND REGULATION BY THE CATTLE BUREAU OF THE STATE BOARD OF AGRICULTURE OF PLACES WHERE NEAT CATTLE, OTHER RUMINANTS OR SWINE ARE KEPT.

Be it enacted, etc., as follows:

SECTION 1. The chief of the cattle bureau and his agents are hereby authorized to enter and inspect all barns, stables, pastures, yards and other places where neat cattle, other ruminants, or swine are kept. The chief of the cattle bureau may make and enforce all reasonable rules and regulations respecting the sanitary condition of such barns, stables and other places, and of the neat cattle, other ruminants and swine kept therein, such rules and regulations to be subject to approval by the governor and council.

SECTION 2. The state board of health, the dairy bureau, and boards of health of cities and towns shall report to the chief of the cattle bureau any and all cases brought to their attention where barns, stables or other enclosures, in which neat cattle, other ruminants or swine are kept, are found to be in an unsanitary condition.

SECTION 3. Whoever prevents or hinders the chief of the cattle bureau or any agent thereof from exercising the powers hereby conferred shall be punished by a fine of not more than fifty dollars or by imprisonment for not more than thirty days.

SECTION 4. Nothing in this act shall be construed to nullify or affect the powers and duties of boards of health conferred upon them by sections sixty-seven to seventy-four, inclusive, of chapter seventy-five of the Revised Laws, and by sections sixty-nine to seventy-two, inclusive, of chapter one hundred and two of the Revised Laws. [*Approved May 1, 1911.*

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Approved by
The State Board of Publication.

WEEKLY RETURNS OF DEATHS FROM CITIES AND TOWNS OF MORE THAN 10,000 POPULATION.

WEEK ENDING MAY 6, 1911.

CITIES AND TOWNS.	Population. Census for 1910.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —					
				Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diphtheria.	Typhoid Fever	Measles.
Boston,	670,585	260	67	99	40	27	6	2	2
Worcester,	145,986	44	11	15	11	1	1	–	–
Fall River,	119,295	55	25	31	10	8	–	1	6
Lowell,	106,294	34	9	11	1	6	–	–	–
Cambridge,	104,839	37	8	15	5	4	1	–	1
New Bedford,	96,652	32	16	13	8	1	–	–	–
Lynn,	89,336	24	2	4	2	1	–	–	–
Springfield,	88,926	38	11	9	3	1	–	–	–
Lawrence,	85,892	35	9	10	4	3	1	1	–
Somerville,	77,236	15	4	4	3	–	–	–	–
Holyoke,	57,730	27	13	6	3	2	–	–	–
Brockton,	56,878	14	1	3	2	–	–	–	–
Malden,	44,404	11	1	2	1	–	–	–	–
Haverhill,	44,115	15	3	6	3	2	–	–	–
Salem,	43,697	10	4	4	3	1	–	–	–
Newton,	39,806	6	2	–	–	–	–	–	–
Fitchburg,	37,826	6	2	2	–	–	1	–	–
Taunton,	34,259	15	1	6	2	3	–	–	–
Everett,	33,484	7	2	3	2	–	–	–	–
Quincy,	32,642	11	2	–	–	–	–	–	–
Chelsea,	32,452	16	3	9	5	1	1	–	–
Pittsfield,	32,121	3	–	–	–	–	–	–	–
Waltham,	27,834	7	0	2	1	1	–	–	–
Brookline,	27,792	7	–	2	–	2	–	–	–
Chicopee,	25,401	10	4	4	–	2	1	–	–
Gloucester,	24,398	10	2	1	–	1	–	–	–
Medford,	23,150	3	1	1	1	–	–	–	–
North Adams,	22,019	10	2	4	2	–	–	–	–
Northampton,	19,431	7	1	–	–	–	–	–	–
Beverly,	18,650	1	–	1	1	–	–	–	–
Revere,	18,219	2	–	1	–	1	–	–	–
Leominster,	17,580	3	1	1	–	1	–	–	–
Attleborough,	16,215	8	2	1	–	1	–	–	–
Westfield,	16,044	2	–	–	–	–	–	–	–
Peabody,	15,721	–	–	–	–	–	–	–	–
Melrose,	15,715	2	0	–	–	–	–	–	–
Hyde Park,	15,507	4	4	1	1	–	–	–	–
Woburn,	15,308	4	2	–	–	–	–	–	–
Newburyport,	14,949	5	–	1	–	–	–	1	–
Gardner,	14,699	3	1	2	1	–	–	–	–
Marlborough,	14,579	7	0	3	3	–	–	–	–
Clinton,	13,075	4	1	1	–	1	–	–	–
Milford,	13,055	3	0	1	–	1	–	–	–
Adams,	13,026	1	0	–	–	–	–	–	–
Framingham,	12,948	3	1	1	–	–	1	–	–
Weymouth,	12,895	–	–	–	–	–	–	–	–
Watertown,	12,875	2	0	1	–	–	–	–	–
Southbridge,	12,592	1	–	–	–	–	–	–	–
Plymouth,	12,141	–	–	–	–	–	–	–	–
Webster,	11,509	6	1	3	1	1	–	–	–
Methuen,	11,448	1	1	–	–	–	–	–	–
Wakefield,	11,404	4	–	2	1	1	–	–	–
Arlington,	11,187	3	2	2	1	–	–	–	–
Greenfield,	10,427	4	1	1	1	–	–	–	–
Winthrop,	10,132	4	–	1	–	1	–	–	–
Recapitulation.									
Total of reporting towns,	2,565,623	846	223	290	122	75	13	5	9

WEEK ENDING MAY 13, 1911.

CITIES AND TOWNS.	Population. Census for 1910.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM—					
				Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	670,585	264	79	106	44	20	3	–	5
Worcester,	145,986	47	15	13	7	3	2	–	–
Fall River,	119,295	35	15	17	10	4	1	–	2
Lowell,	106,294	29	9	12	5	2	1	–	–
Cambridge,	104,839	35	12	14	9	–	2	–	–
New Bedford,	96,652	26	13	13	6	2	–	–	–
Lynn,	89,336	27	6	6	3	3	–	–	–
Springfield,	88,926	21	–	6	5	1	–	–	–
Lawrence,	85,892	25	9	6	6	–	–	–	–
Somerville,	77,236	21	3	2	1	–	1	–	–
Holyoke,	57,730	19	6	3	1	1	–	–	–
Brockton,	56,878	13	4	6	6	–	–	–	–
Malden,	44,404	14	1	2	1	–	–	–	–
Haverhill,	44,115	10	3	2	2	–	–	–	–
Salem,	43,697	18	6	6	4	2	–	–	–
Newton,	39,806	10	1	2	1	–	–	–	–
Fitchburg,	37,826	11	2	3	2	1	–	–	–
Taunton,	34,259	20	1	6	4	2	–	–	–
Everett,	33,484	10	2	1	–	–	1	–	–
Quincy,	32,642	4	2	2	1	1	–	–	–
Chelsea,	32,452	16	4	6	1	2	–	–	–
Pittsfield,	32,121	10	3	1	1	–	–	–	–
Waltham,	27,834	10	1	1	–	–	–	–	1
Brookline,	27,792	4	–	1	–	1	–	–	–
Chicopee,	25,401	5	3	–	–	–	–	–	–
Gloucester,	24,398	6	2	–	–	–	–	–	–
Medford,	23,150	3	–	2	1	1	–	–	–
North Adams,	22,019	2	2	–	–	–	–	–	–
Northampton,	19,431	11	0	2	1	1	–	–	–
Beverly,	18,650	4	2	–	–	–	–	–	–
Revere,	18,219	6	1	1	–	–	–	–	–
Leominster,	17,580	1	1	–	–	–	–	–	–
Attleborough,	16,215	4	1	1	–	–	–	–	–
Westfield,	16,044	6	3	3	1	1	–	–	–
Peabody,	15,721	–	–	–	–	–	–	–	–
Melrose,	15,715	5	0	1	1	–	–	–	–
Hyde Park,	15,507	5	0	1	–	–	1	–	–
Woburn,	15,308	1	0	1	–	1	–	–	–
Newburyport,	14,949	5	1	–	–	–	–	–	–
Gardner,	14,699	2	–	1	–	1	–	–	–
Marlborough,	14,579	6	0	3	1	2	–	–	–
Clinton,	13,075	6	–	1	–	–	–	–	–
Milford,	13,055	5	1	1	–	–	–	–	–
Adams,	13,026	2	0	1	1	–	–	–	–
Framingham,	12,948	4	1	–	–	–	–	–	–
Weymouth,	12,895	–	–	–	–	–	–	–	–
Watertown,	12,875	5	2	–	–	–	–	–	–
Southbridge,	12,592	2	1	–	–	–	–	–	–
Plymouth,	12,141	–	–	–	–	–	–	–	–
Webster,	11,509	6	4	2	1	1	–	–	–
Methuen,	11,448	3	2	–	–	–	–	–	–
Wakefield,	11,404	1	1	–	–	–	–	–	–
Arlington,	11,187	4	1	2	–	2	–	–	–
Greenfield,	10,427	4	1	1	–	1	–	–	–
Winthrop,	10,132	2	–	–	–	–	–	–	–
Recapitulation.									
Total of reporting towns,	2,565,623	815	227	261	127	56	12	–	8

WEEK ENDING MAY 20, 1911

CITIES AND TOWNS.	Population. Census for 1910.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM — Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	670,585	231	61	73	32	20	1	–	1
Worcester,	145,986	40	10	16	12	2	1	–	–
Fall River,	119,295	48	28	26	17	2	–	–	4
Lowell,	106,294	29	6	7	3	2	–	–	–
Cambridge,	104,839	36	5	17	11	4	–	–	–
New Bedford,	96,652	29	14	14	9	3	–	1	–
Lynn,	89,336	20	5	9	5	3	–	–	–
Springfield,	88,926	30	6	9	2	3	–	–	–
Lawrence,	85,892	24	13	16	7	2	–	–	5
Somerville,	77,236	20	5	2	2	–	–	–	–
Holyoke,	57,730	13	3	2	1	1	–	–	–
Brockton,	56,878	11	4	2	–	–	–	–	–
Malden,	44,404	14	5	4	2	1	–	–	–
Haverhill,	44,115	11	–	3	2	1	–	–	–
Salem,	43,697	14	4	6	3	2	1	–	–
Newton,	39,806	10	3	2	2	–	–	–	–
Fitchburg,	37,826	7	–	2	1	1	–	–	–
Taunton,	34,259	8	1	3	2	1	–	–	–
Everett,	33,484	10	3	1	–	–	–	–	–
Quincy,	32,642	8	0	1	–	1	–	–	–
Chelsea,	32,452	15	5	5	1	1	–	–	–
Pittsfield,	32,121	13	3	–	–	–	–	–	–
Waltham,	27,834	3	1	–	–	–	–	–	–
Brookline,	27,792	8	1	1	1	–	–	–	–
Chicopee,	25,401	3	2	3	2	1	–	–	–
Gloucester,	24,398	8	1	1	1	–	–	–	–
Medford,	23,150	6	2	4	4	–	–	–	–
North Adams,	22,019	6	3	1	1	–	–	–	–
Northampton,	19,431	3	0	1	1	–	–	–	–
Beverly,	18,650	0	–	–	–	–	–	–	–
Revere,	18,219	2	1	–	–	–	–	–	–
Leominster,	17,580	3	1	–	–	–	–	–	–
Attleborough,	16,215	1	0	–	–	–	–	–	–
Westfield,	16,044	7	1	4	1	3	–	–	–
Peabody,	15,721	–	–	–	–	–	–	–	–
Melrose,	15,715	5	0	2	–	2	–	–	–
Hyde Park,	15,507	3	1	1	–	–	–	–	–
Woburn,	15,308	4	0	1	–	–	–	–	–
Newburyport,	14,949	2	–	–	–	–	–	–	–
Gardner,	14,699	5	2	–	–	–	–	–	–
Marlborough,	14,579	7	1	1	–	1	–	–	–
Clinton,	13,075	2	–	2	1	1	–	–	–
Milford,	13,055	4	1	2	2	–	–	–	–
Adams,	13,026	2	1	1	–	1	–	–	–
Framingham,	12,948	4	1	2	2	–	–	–	–
Weymouth,	12,895	–	–	–	–	–	–	–	–
Watertown,	12,875	1	0	–	–	–	–	–	–
Southbridge,	12,592	3	1	1	–	–	–	–	–
Plymouth,	12,141	–	–	–	–	–	–	–	–
Webster,	11,509	1	0	1	1	–	–	–	–
Methuen,	11,448	3	–	–	–	–	–	–	–
Wakefield,	11,404	5	–	1	–	1	–	–	–
Arlington,	11,187	3	3	1	1	–	–	–	–
Greenfield,	10,427	7	2	1	1	–	–	–	–
Winthrop,	10,132	1	–	–	–	–	–	–	–

Recapitulation.

Total of reporting towns,	2,565,623	753	210	252	133	60	3	1	10

WEEK ENDING MAY 27, 1911.

CITIES AND TOWNS.	Population. Census for 1910.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM— Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	670,585	238	63	78	36	24	1	2	2
Worcester,	145,986	34	5	5	1	2	–	–	–
Fall River,	119,295	28	14	14	5	3	–	–	–
Lowell,	106,294	49	8	9	5	3	–	–	–
Cambridge,	104,839	38	9	9	5	3	–	–	–
New Bedford,	96,652	26	14	12	7	–	–	2	–
Lynn,	89,336	14	3	6	4	2	–	–	–
Springfield,	88,926	26	3	10	6	2	–	–	–
Lawrence,	85,892	29	12	17	6	3	–	–	–
Somerville,	77,236	13	5	2	1	–	–	–	–
Holyoke,	57,730	13	4	2	1	1	–	–	–
Brockton,	56,878	14	6	3	1	1	–	–	–
Malden,	44,404	8	1	–	–	–	–	–	–
Haverhill,	44,115	8	2	1	1	–	–	–	–
Salem,	43,697	14	2	5	1	–	1	–	–
Newton,	39,806	9	2	3	3	–	–	–	–
Fitchburg,	37,826	7	1	2	2	–	–	–	–
Taunton,	34,259	11	3	3	1	–	–	–	–
Everett,	33,484	11	–	–	–	–	–	–	–
Quincy,	32,642	10	3	3	1	1	–	–	–
Chelsea,	32,452	13	6	3	2	1	–	–	–
Pittsfield,	32,121	9	1	1	1	–	–	–	–
Waltham,	27,834	8	0	–	–	–	–	–	–
Brookline,	27,792	8	1	1	–	–	–	–	–
Chicopee,	25,401	7	5	2	2	–	–	–	–
Gloucester,	24,398	8	1	1	–	1	–	–	–
Medford,	23,150	4	1	1	1	–	–	–	–
North Adams,	22,019	2	1	1	1	–	–	–	–
Northampton,	19,431	4	0	–	–	–	–	–	–
Beverly,	18,650	7	1	2	–	1	–	–	–
Revere,	18,219	1	1	–	–	–	–	–	–
Leominster,	17,580	0	–	–	–	–	–	–	–
Attleborough,	16,215	1	1	–	–	–	–	–	–
Westfield,	16,044	2	1	–	–	–	–	–	–
Peabody,	15,721	–	–	–	–	–	–	–	–
Melrose,	15,715	4	1	–	–	–	–	–	–
Hyde Park,	15,507	2	–	–	–	–	–	–	–
Woburn,	15,308	5	2	–	–	–	–	–	–
Newburyport,	14,949	6	–	1	–	–	–	1	–
Gardner,	14,699	3	1	2	–	1	–	–	–
Marlborough,	14,579	6	0	2	–	1	–	–	–
Clinton,	13,075	0	–	–	–	–	–	–	–
Milford,	13,055	4	0	1	1	–	–	–	–
Adams,	13,026	1	0	–	–	–	–	–	–
Framingham,	12,948	2	1	–	–	–	–	–	–
Weymouth,	12,895	–	–	–	–	–	–	–	–
Watertown,	12,875	2	2	–	–	–	–	–	–
Southbridge,	12,592	3	1	–	–	–	–	–	–
Plymouth,	12,141	–	–	–	–	–	–	–	–
Webster,	11,509	2	1	–	–	–	–	–	–
Methuen,	11,448	3	2	–	–	–	–	–	–
Wakefield,	11,404	4	–	3	1	1	–	–	–
Arlington,	11,187	2	–	1	–	–	1	–	–
Greenfield,	10,427	0	–	–	–	–	–	–	–
Winthrop,	10,132	3	–	1	–	1	–	–	–
Recapitulation.									
Total of reporting towns,	2,565,623	726	191	207	96	52	3	5	2

WEEKLY RETURNS OF DEATHS FROM CERTAIN INFECTIOUS DISEASES.

Deaths from Infectious Diseases not specifically mentioned in above Tables during the Weeks of May 6, 13, 20, and 27, 1911.

Disease.	Place.	Week ending — May 6	May 13	May 20	May 27.
Cerebro-spinal meningitis,	Boston,	1	–	–	–
	Beverly,	–	–	–	1
	Clinton,	–	1	–	–
	Everett,	1	–	1	–
	Gardner,	1	–	–	–
	Lowell,	–	1	–	–
	Lynn,	–	–	1	–
	New Bedford,	1	1	–	–
	Quincy,	–	–	–	1
	Woburn,	–	–	1	–
Scarlet fever,	Boston,	2	2	3	1
	Cambridge,	–	–	1	–
	Chelsea,	–	2	2	–
	Holyoke,	1	–	–	–
Whooping cough,	Boston,	3	9	2	1
	Cambridge,	2	1	–	–
	Fall River,	2	–	–	–
	Fitchburg,	1	–	–	–
	Lowell,	–	1	–	–
	Lynn,	1	–	–	–
	Milford,	–	1	–	–
	New Bedford,	2	1	–	1
	Southbridge,	–	–	1	–
	Springfield,	–	–	–	1
	Worcester,	1	1	–	–
Erysipelas,	Boston,	–	7	–	1
	Cambridge,	–	–	1	–
	Chelsea,	1	1	–	–
	Lowell,	–	1	1	–
	Worcester,	1	–	–	–
Tuberculosis other than pulmonary.	Attleborough,	–	1	–	–
	Boston,	3	4	6	3
	Cambridge,	1	2	–	–
	Chelsea,	1	–	1	–
	Haverhill,	1	–	–	–
	Lowell,	3	1	1	–
	Malden,	1	–	–	–
	New Bedford,	–	2	1	1
	Newton,	–	1	–	–

DEATHS FROM INFECTIOUS DISEASES, ETC. — *Concluded.*

DISEASE.	Place.	WEEK ENDING —			
		May 6.	May 13	May 20.	May 27.
Tuberculosis other than pulmonary — *Con.*	Revere,	–	1	–	–
	Salem,	–	–	–	3
	Somerville,	1	–	–	1
	Springfield,	1	–	2	1
	Taunton,	1	–	–	–
	Watertown,	1	–	–	–
	Worcester,	–	–	1	1
Influenza,	Arlington,	1	–	–	–
	Boston,	1	2	–	2
	Brockton,	1	–	–	–
	Webster,	1	–	–	–
	Worcester,	–	–	–	1
Meningitis other than cerebro-spinal.	Brockton,	–	–	1	–
	Hyde Park,	–	–	1	–
	North Adams,	1	–	–	–
	Wakefield,	–	–	–	1
Anterior poliomyelitis,	Lowell,	1	–	–	–
	Malden,	–	–	1	–
	Westfield,	–	1	–	–

WEEKLY RETURNS OF CASES OF INFECTIOUS DISEASES.

Cases of Infectious Diseases reported during the Weeks of May 6, 13, 20 and 27, 1911.

[Under the provisions of section 52 of chapter 75 of the Revised Laws.]

	Week ending—				
	May 6.	May 13.	May 20.	May 27.	Total.
Diphtheria,	103	106	119	118	446
Measles,	708	942	711	734	3,095
Scarlet fever,	115	158	188	163	624
Typhoid fever,	29	19	26	23	97
Tuberculosis, pulmonary,	174	172	152	166	664
Tuberculosis other than pulmonary,	2	4	5	–	11
Cerebro-spinal meningitis,	6	3	3	2	14
Meningitis other than cerebro-spinal,	2	2	–	1	5
Whooping cough,	61	70	72	78	281
Varicella,	43	63	53	42	201
Erysipelas,[1]	2	–	2	1	5
Mumps,[1]	6	10	11	8	35
Ophthalmia neonatorum,	28	24	32	25	109
Anterior poliomyelitis,	2	2	1	1	6
Trachoma,	–	–	1	–	1
Smallpox,	–	2	2	–	4
Malaria,	2	–	–	–	2
Leprosy,	1	–	–	–	1
Actinomycosis,	–	–	1	–	1
Tetanus,	2	1	1	1	5

[1] Erysipelas and mumps are not diseases notifiable under section 52 of chapter 75 of the Revised Laws. The figures concerning these diseases are, therefore, incomplete.

MONTHLY REPORT ON INSPECTION OF FOOD AND DRUGS.

The following summary presents the results of the examination of food and drugs made by the State Board of Health during the month of May, 1911:—

Articles examined.	Number found to be of Good Quality.	Number adulterated or varying from the Legal Standard.	Total.	Articles examined.	Number found to be of Good Quality.	Number adulterated or varying from the Legal Standard.	Total.
Butter,	1	–	1	Maple sugar,	6	1	7
Canned fish,	3	–	3	Maple syrup,	2	–	2
Canned fruit,	1	–	1	Meat products: —			
Cheese,	1	–	1	Hamburg steak,	1	–	1
Cider,	2	2	4	Sausages,	7	3	10
Clams,	1	–	1	Milk,	361	73	434
Cocoa,	1	–	1	Non-alcoholic drink,	1	–	1
Condensed milk,	1	–	1	Olive oil,	3	–	3
Confectionery,	2	2	4	Pickles,	10	2	12
Drugs,	55	17	72	Salad dressing,	4	–	4
Eggs,	–	4	4	Spices,	1	–	1
Flavoring extracts,	4	5	9	Table sauces,	4	3	7
Grape juice,	2	–	2	Vinegar,	2	1	3
Honey,	4	–	4	Yeast,	4	–	4
Lard,	1	–	1				
Malt liquor,	1	–	1	Total,	486	113	599

The samples of drugs found to be adulterated were: alchohol, spirit of peppermint, tincture of arnica, tincture of iodine and several proprietary medicines.

The cities and towns in which samples were collected were: Abington, Andover, Ashby, Attleborough, Ayer, Boston, Braintree, Brockton, Brookline, Bridgewater, Chelsea, Dedham, Everett, Fall River, Fitchburg, Franklin, Greenfield, Hinsdale, Hyde Park, Lancaster, Lanesborough, Lexington, Lowell, Lynn, Malden, Marlborough, Mansfield, Medford, Marblehead, Natick, New Bedford, Newburyport, North Attleborough, Peabody, Pittsfield, Quincy, Reading, Salem, Somerville, Spencer, Taunton, Wakefield, Waltham, Whitman, Winthrop and Worcester.

PROSECUTIONS FOR VIOLATIONS OF THE LAW RELATING TO FOOD AND DRUGS.

Seventeen convictions were secured during the month of May, 1911, for selling adulterated food and drugs as follows:—

No.	Name of Defendant.	Place.	Character of Article sold.
1	Louis L. Cardinal,	Boston,	Alcohol (denatured, not labeled).
2	Walter G. Kent,	Franklin,	Cream (contained a preservative).
3	John D. Powell,	Franklin,	Cream (contained a preservative).
4	Harry A. Bliss,	Salem,	Extract vanilla (contained wood alcohol).
5	Harry A. Bliss,	Salem,	Extract lemon (contained wood alcohol).
6	James White,	Lowell,	Lard (contained cottonseed oil).
7	Frank F. Este,	Marlborough,	Milk (total solids, 10.40).[1]
8	William Golden,	North Attleborough,	Milk (total solids, 11.40).[1]
9	Edward J. Gorman,	North Abington,	Milk (total solids, 10.20).[1]
10	Walter G. Kent,	Franklin,	Milk (total solids, 11.17).[1]
11	Walter Lovell,	West Hanover,	Milk (total solids, 9.76).[1]
12	John D. Powell,	Franklin,	Milk (total solids, 9.16).[1]
13	John D. Powell,	Franklin,	Milk (total solids, 11.17).[2]
14	Samuel E. Stone,	Ashburnham,	Milk (total solids, 10.66).[2]
15	Oscar P. Cognac,	Lowell,	Sausages (contained cereal).
16	Quirino Ciochetti,	Boston,	Tincture of arnica.
17	The Fleischmann Company,	Fall River,	Vinegar (colored).

[1] Skimmed. [2] Watered.

Fines imposed, $705.

LIST OF ADULTERATED OR IMPROPERLY LABELED FOODS, ETC., FOR MAY, 1911.

Number of Sample.	Character of Sample.	Name of Manufacturer, Wholesaler or Producer.	Results of Analyses.
1525	Pure Russet Cider, .	J. Keron, Central Falls, R. I., ...	Preserved with salicylic and benzoic acids.
14491	Castle Pure Extract of Lemon.	Manufactured for Simpson Bros. Company, . . .	No lemon oil present.
14490	Castle Pure Extract of Vanilla.	Manufactured for Simpson Bros. Company, . . .	Contained coumarin.
–	"Crescent" Brand Catsup.	Charles L. Hirsh & Co., New York, ...	Contained benzoic acid; percentage incorrectly stated.
6851 R	"Standco" Brand Tomato Ketchup.	Standard Importing Company, New York and Boston, Mass.	Contained benzoic acid; percentage incorrectly stated.
6849 R	Perfection Tomato Catsup.	Standard Grocery Company, Boston, Mass., . . .	Contained benzoic acid; percentage incorrectly stated.
–	Vino de Quina y Cacao, del Dr. Castillo.	Gutierrez Hermános, Jerez, ...	Contained 18.25 per cent. alcohol by volume.
14327	Laxative Quinino Tablets.	Standard Soap Works, Boston, Mass., ...	Contained acetanilide.
14641	Spirit of Peppermint, .	Lowell Pharmacy, Routhier & Delisle, Lowell, Mass., .	44.2 per cent. U. S. P. strength.
7433 R	Milk, ...	Julius L. Lowenstein, Hinsdale, Mass., . . .	Total solids, 11.16 per cent.; fat, 3.60 per cent.; contained added water.
7499 R	Milk, ...		Total solids, 11.44 per cent.; fat, 4.00 per cent.; contained added water.
q 6935	Milk, ...	George A. Cutting, Fitchburg, Mass., ...	Total solids, 10.52 per cent.; fat, 3.00 per cent.; contained added water.
8748 N	Milk, ...	William H. Wakefield, Spencer, Mass., ...	Total solids, 11.36 per cent.; fat, 2.30 per cent.; proteids, 3.30 per cent.; skimmed milk.

INSPECTION OF DAIRIES.

During the month of May, 1911, 236 dairies supplying milk for public sale in Massachusetts were examined, 1 of which is situated in Vermont. The Massachusetts dairies yielded the following data: —

Place.	Number examined.	Number found to present no Objectionable Features.	Per Cent.	Number concerning which Letters were sent.	Per Cent.
Adams,	30	20	66.67	10	33.33
Avon,	1	–	–	1	100.00
Second inspection,	9	8	88.89	1	11.11
Braintree,	1	1	100.00	–	–
Third inspection,	1	1	100.00	–	–
Charlemont,	9	5	55.56	4	44.44
Granby,	1	1	100.00	–	–
Second inspection,	1	–	–	1	100.00
Third inspection,	11	9	81.82	2	18.18
Fourth inspection,	1	1	100.00	–	–
Hawley,	11	11	100.00	–	–
Heath,	9	7	77.78	2	22.22
Holyoke,	3	1	33.33	2	66.67
Second inspection,	1	1	100.00	–	–
Third inspection,	3	2	66.67	1	33.33
Lexington,	–	–	–	–	–
Third inspection,	1	–	–	1	100.00
Southampton,	11	5	45.45	6	54.55
Second inspection,	15	12	80.00	3	20.00
South Hadley,	2	1	50.00	1	50.00
Second inspection,	3	2	66.67	1	33.33
Third inspection,	20	15	75.00	5	25.00
Stoughton,	22	12	54.55	10	45.45
Second inspection,	13	8	61.54	5	38.46
Westfield,	5	3	60.00	2	40.00
Second inspection,	4	3	75.00	1	25.00
Third inspection,	2	2	100.00	–	–

Total number of dairies examined (including that in Vermont),	236
Number found to be free from objectionable conditions,	131
Number to which letters were sent,	60
Total number of conditions to which attention was called,	150
Percentage of dairies which passed inspection,	55.51

In addition to the above, 45 dairies were visited at which the sale of milk had been discontinued.

The towns of Rowe and Savoy were also visited and it was found that the milk produced was not marketed as such, but was turned into butter by the individual farmers.

The names of the owners of the dairies found to be worthy of commendation follow: —

ADAMS.

Class A.

Dudley, John C.

Class B.

Adams Town Farm
Andrews, William
Anthony, Archie
Avery, Frank
Bowen, Fred C.
Burt, Mrs. Lucy
Cann, Walter
Dean, J. B.
Fales, Charles
Follett, David
Gould, C. O.
Hinds, Lewis
Horn, Charles
Howland, Edward
Stohlman, Richard
Vigeant, Dolphis
Walling, Asa A.
Wenzel, August
Young, Fred

Avon.

Class B.

Anderson, Carl *
Beale, Wallace * †
Crane, O. B.* †
French, Alfred *
Littlefield, Fred E.* †
Lothrop, Estate of George * †
Mannigan, P. H.*
McGonnigle, John * †

Braintree.

Class B.

Foster, Fred G.‡ †
Summers, N. E.

Charlemont.

Class B.

Fife, S. H.
Hawkes, C. W.
Legate, F. M.
Rice, Arthur O.
Tower, Philo

Granby.

Class A.

Ball, Charles W. ‡

Class B.

Bourbonnais, J. A.§
Corture, Homer
Desroclies, C.‡
DeWitte, B. F.‡
Guiel Bros.‡
Isbell, Zavier ‡ †
Racine, Lucien ‡
Randall, C. H.‡ ¶
Smith, Geo. R.‡
Turgeon, A.‡

Hawley.

Class B.

Brackett, W. A.
Galbraith, Thomas
Howes, Frank
James, Amos
James, L. R.
McDonald, John
Raymond, Fred A.
Sears, George E.
Sears, George W.
Stiles, Fred
White, Melvin E.

Heath.

Class B.

Brown, George
Carley, A. L.
Day, Albert
Lively, Armedose
Lively, Levi
Thompson, Jesse
Tucker, W. E.

Holyoke.

Class B.

Homans, W. D.‡
Klopfer, Max
Peterson, Henry ‡ †
Wright, A. E.* †

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* Second inspection. † Reported favorably on first inspection. ‡ Third inspection.
§ Fourth inspection. ¶ Reported favorably on second inspection.

Southampton.

Class B.

Brass, R. T * †
Canjoll, Peter
Douglass, George *
Frary, A. C.
Granger, C. C.
Jenks, George M.*
Klapenstein, Peter *
Kupiski, John *
Kurtz, John *
Parsons, W. A.* †
Pease, A. P.
Quigley, Albert I.*
Russell, R. A.
Searles, O. M.* †
Sheldon, E. S.*
Swanson, Alfred *
Tyler, George *

South Hadley.

Class B.

Asquith, Alfred *
Boynton, J. S.‡ †
Charon, Felix ‡
Day, I. N.‡ ¶
Dressel, Henry ‡
Hamilton, Charles ‡ ¶
Judd, Charles A.‡ ¶
Lavee, Anthony *
Lyman, Eugene H.‡ ¶
Malenowski, Alex.‡
McCray, J. H.
McElwain, William ‡
Mellen, James C.‡ †
Mueller, Henry ‡
Robiniski, V.‡
Smith, Ellis R.‡
Smith, Newton ‡
Strong, A.‡ ¶

Stoughton.

Class A.

Hutchins, E. B.
Monk, Frank* †
Porter, Charles

Class B.

Akers, James A.
Atherton, Frank* †
Barker, Frank
Bird, William
Bisbee, John
Bohnenberger, Fred'k
Clifford, George Q.
Farrington, E. F.*
Gay, Aaron * †
Goldsmith, S. S.* †
Helman, Kiva
Kimball, W. A.
Littlefield, Horace M.
McNamara, J. F.* †
Mitchell, C. W.*
Sanborn, G. F.
Stoughton Town Farm * †

Westfield.

Class B.

Burt, O. L.‡
Clark, Frederick L.
Higgins, N. H.‡ ¶
Lorenz, Henry *
McElligott, John * †
Moore, F. E.
Talmadge, W. H.* †
Westfield Brick Company

Vermont.

Place.	Number examined.	Number found to present no Objectionable Features.	Per Cent.	Number concerning which Letters were sent.	Per Cent.
Whitingham, . . .	1	–	–	1	100.00

* Second inspection.
† Reported favorably on first inspection.
‡ Third inspection.
¶ Reported favorably on second inspection.

THE OCCURRENCE OF INFANTILE PARALYSIS IN MASSACHUSETTS IN 1910.[1]

Reported for the Massachusetts State Board of Health, by Robert W. Lovett, M.D., Boston and Philip A. E. Sheppard, M.D., Boston.

The last year has been one of considerable progress in our knowledge of infantile paralysis. The disease has been widespread in the United States; 23 States have made the disease reportable, and several State boards of health have taken up the work of investigation. The clinical study of cases has become more accurate and careful, and the importance and frequency of abortive cases has been much more fully recognized.

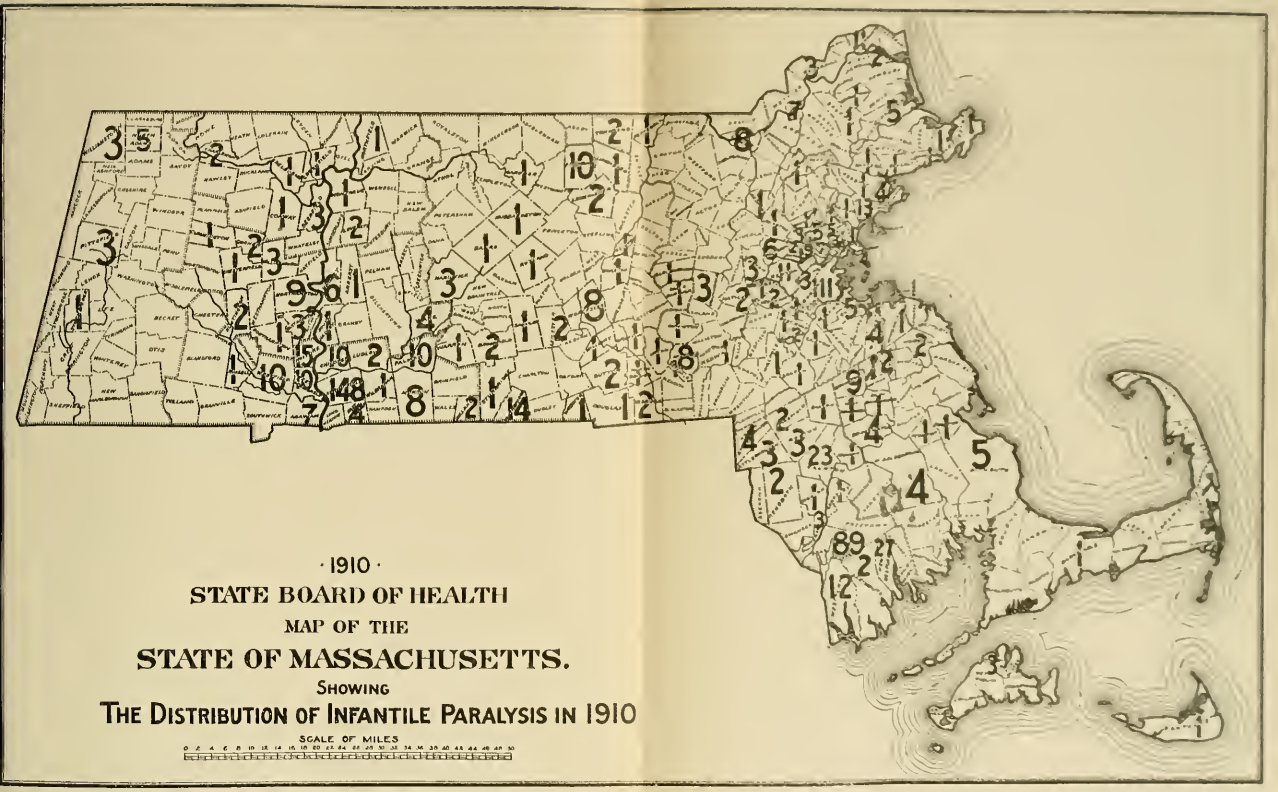
Three certain interesting contributions to our knowledge are as follows: —

Osgood and Lucas found an active virus in the naso-pharyngeal membrane of one monkey, who had recovered from the acute attack, five and one-half months afterward, and in another six weeks afterward. This virus was sufficiently active to cause paralysis in a first and second generation of monkeys into which it was injected.[2]

The second contribution is from Flexner and Clark.[3] It has been previously shown that if hexamethylenamin is administered by mouth, its presence can be detected in the cerebro-spinal fluid. Flexner and Clark showed that if the drug be given by mouth, and its use continued after its presence in the spinal fluid can be detected in monkeys, and if such animals are subsequently inoculated either subdurally or by the intracerebral route, the paralysis is in a certain proportion of cases delayed or prevented. But successful results by the drug have so far been obtained in inhibiting infection, and not in restraining an already established infection. In other words, there is as yet an absence of experimental evidence to show that the drug is of much use when the disease has begun.

A third contribution by Anderson and Frost[4] is as follows: It is only very recently that it has been found possible by a laboratory method to throw back light on whether a suspicious case occurring in the past may or may not have been abortive infantile paralysis. It is possible by means of neutralization tests to determine this matter by mixing the blood serum of the recovered case with the filtered virus, and injecting the mixture

[1] Reprinted from the "Boston Medical and Surgical Journal," May 25, 1911.
[2] Jour. Am. Med. Asso., Feb. 18, 1911, p. 495.
[3] *Ibid.*, Feb. 25, 1911, p. 585.
[4] *Ibid.*, March 4, 1911, p. 663.



·1910·

STATE BOARD OF HEALTH

MAP OF THE

STATE OF MASSACHUSETTS.

SHOWING

THE DISTRIBUTION OF INFANTILE PARALYSIS IN 1910

SCALE OF MILES

0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50

into a monkey, the serum of recovered cases having the power of neutralizing a certain amount of the virus.

By a study of the changes in the cerebro-spinal fluid in monkeys preceding the paralysis, a forecast of the probable changes in man was worked out, and paralysis predicted in a human case where a lumbar puncture was done early. The case is reported by Frissell.[1] The changes are the following: At the height of the lesions in the meninges it has been found in monkeys and confirmed in a human case that the cerebro-spinal fluid is slightly turbid or opalescent, and contains an excess of protein. There is a large increase of white cells, both poly- and mononuclear. The fluid may in some cases be distinctly turbid, and polynuclear cells may predominate. Paralysis occurs at the height of these changes, and then the changes described in the fluid begin to disappear.

In the matter of etiology more attention has been paid to dust, and the data reported by Hill[2] are suggestive. In Winona, Minn., there were 29 cases up to the end of July, 27 occurring on dusty streets. On August 5 street watering was begun at the suggestion of the State and local health officials, and no case occurred in Winona after August 12, although the greatest incidence throughout the State had yet to develop, and the neighborhood outside of Winona continued to show cases. Hill quotes also three other instances in the State of a similar occurrence.

The need of quarantine is being appreciated, and the experience in Nebraska is worth quoting:[3] "We were informed that no legal provision had been made for quarantining such cases, and isolation was recommended, but, of course, could not be enforced, nor could the impending Fourth of July celebration be abandoned. This celebration was well attended, and shortly after cases were reported from communities previously free from the disease, and having had representatives present at the celebration. From May 30 to July 4 we had in the Stromsberg territory 30 cases, while from July 4 to August 3, just thirty days, we had 115 cases." A quarantine was declared necessary, and put into effect on July 22, and after August 3 there were only 15 cases in the Stromsberg territory.

The salient points in progress may be summarized as follows: —

(1) A decidedly keener attitude on the part of the profession, the health boards and legislative bodies toward the disease.

(2) The knowledge that the infection may persist in the nasopharynx in monkeys for long periods.

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[1] Jour. Am. Med. Asso., March 4, 1911, p. 661.
[2] Trans. Prev. Med. of Am. Med. Asso., 1910.
[3] Anderson: Pediatrics, August, 1910.

(3) The possibility of diagnosticating after recovery the character of abortive cases.

(4) The possibility of early diagnosis by means of lumbar puncture.

(5) The possibility that hexamethylenamin may be in monkeys at times a preventive of infection, but does not apparently control established infection.

During the year 1910 the Massachusetts State Board of Health continued for the fourth consecutive year the investigation of infantile paralysis as it occurred in the State.[1]

The disease having been made a reportable one in November, 1909, the Board received notice of cases reported by physicians, and to them blanks were sent to be filled out and returned. Dr. Philip A. E. Sheppard and Dr. T. P. Hennelly were employed by the Board to investigate the cases at their homes, to make an intensive study of epidemic centers and to see as many other cases reported as practicable. The scope and direction of the inquiry have again been supervised by an advisory committee, consisting of Dr. Theobald Smith, Dr. Milton J. Rosenau, Dr. James H. Wright and Dr. John Lovett Morse, who have met at frequent intervals the secretary of the Board and the members concerned in the inquiry. The Legislature of 1910 generously appropriated the sum of $5,000 for the purposes of this investigation.

The data relating to the disease in the State during the year 1910 will be here presented, and later, in another form, will be presented those conclusions that seem warranted by a study of the disease in Massachusetts for four years, with certain general considerations with regard to the disease. The investigation will be continued in 1911 on a more extended scale, $10,000 having been appropriated for the purpose by this year's Legislature.

There are three classes of cases to be reported on: —

(1) The total cases reported by physicians with their location, — 845.

(2) The number of cases for which blanks were filled out, — 601.

(3) A group of cases carefully studied by the medical investigators of the Board, — 200.

The groups of cases considered in various respects will, therefore, differ in number, more space in general being allotted to the 200 carefully studied than to the others.

The record of the last four years is as follows: —

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[1] Boston Med. and Surg. Jour., 1908, clix, p. 131; *Ibid.*, 1909, July 22; *Ibid.*, 1910, clxiii, p. 37; Am. Jour. Pub. Hyg., November, 1910, p. 875.

Year.	Cases.	Cities and Towns with Cases.	Year.	Cases.	Cities and Towns with Cases.
1907,	234	75	1909,	923	136
1908,	136	47	1910,	845	153

The distribution of the cases is seen in the map, from which it will be seen that marked epidemic centers existed in Springfield and Fall River, with a suggestion of a minor epidemic center in Boston. The number of cities and towns affected was larger in 1910 than in 1909, when there were a greater total number of cases.

Deficiency Rainfall, 1904–10, Inclusive (Inches).

Year.	Cases in State.	Actual.	Normal.	Deficiency.
1904,	–	43.81	45.16	—1.35
1905,	–	37.60	–	—7.56
1906,	–	43.21	–	—1.95
1907,	234	44.49	–	—0.67
1908,	136	37.61	–	—7.55
1909,	923	42.10	–	—3.06
1910,	845	35.50	–	—9.42
				—31.56

A consideration of this table shows that for the last four years the driest years have not been attended by the largest number of cases in Massachusetts.

The comparison of the rainfall by months and the incidence of the disease shows that in 1910 August was the driest of the three summer months, and also the one in which the largest number of cases occurred. August was also the month with the highest mean temperature, so that both drought and heat were at their height when the largest number of cases occurred.

Analysis of Cases thoroughly studied (200 Cases in 186 Families).

Total number of children,		488
Number of contemporaneous illnesses in children and adults,		253
Number of children paralyzed,	172	
Number of adults paralyzed,	28	
	—	200
Possible abortive cases,		53

An investigation of the nearness of the affected house to railroad and highroad showed no preponderating number close to either, 15 per cent.

being close to a railroad and about 60 per cent. on the highroad. The nearness to water in the 200 cases studied in and around Springfield showed 17 per cent. within one-eighth mile of the river, 35 per cent. within one-fourth mile and the rest at greater distances. Of the remaining cases in other localities, in the great majority of cases where it was stated, the house was not near the water.

Surroundings of Patients.

Age of house. — The affected house was a new house, that is, less than ten years old, in 27 per cent. of the cases, and over 10 years old in the remainder, and an investigation of the *sanitary condition* of the house showed, as in former years, that in most cases such conditions ranged from fair to excellent. In 74 per cent. of the cases the location was given as "dry," and as "damp" in the remainder.

An investigation of the *water supply* and *sewage disposal* showed in the great majority of cases city and metropolitan water supply and sewage disposal, so that no common factor is to be found in either of these elements which might be assigned as a possible cause.

Dust. — The amount of dust in affected localities was most carefully inquired into, but there is no standard of measurement, and the information in the following table must be regarded as only approximately accurate: —

	Cases.
No dust,	156
Very little dust,	124
Much dust,	123
Moderate amount of dust,	172
Excessive amount of dust,	7
Not stated,	77

In this connection the treatment of streets on which cases occurred was investigated. The results were as follows: —

	Cases.
No treatment,	316
Watered,	162
Oiled,	32
Watered and oiled,	16
Not stated,	75
	601

Digging or *excavating* in the neighborhood of affected houses had been in progress in a little over 15 per cent. of 334 cases where data existed on this point.

Presence of Insects, Vermin, Rodents, etc.

Among 185 families, 185 had insects, etc., as follows: —

	Families.
Flies were present in	185
Mosquitoes were present in	67
Ants were present in	62
Mice (house) were present in	60
Bedbugs were present in	39
Roaches were present in	29
Spiders were present in	26
Rats were present in	23
Biting flies were present in	7
Field mice were present in	4
Fleas were present in	2
Bees were present in	2
Sand fleas were present in	1
Snakes were present in	1
Crickets were present in	1
Squirrels were present in	1
Leeches were present in	1

As to *insect bites,* there was no such history in 70 per cent. of 200 cases carefully investigated; a history of mosquito bites in 27 per cent. and in the remainder bites from various insects were recorded.

Any investigation as to the prevalence of an especial insect in a given locality, which is to be of much value, must be made on the spot by a person skilled in entomology, and definite conclusions cannot be based on the above table.

Data as to Illness in Domestic Animals and Birds.

Of 186 families: —

No animal of any kind in	76
Animals present in	110
	186

Thus: —

(*a*) 27 homes had 31 dogs without sickness.
50 homes had 66 cats without sickness.
39 homes had about 745 hens and chickens without sickness.
11 homes had 18 horses without sickness.
3 homes had 3 cows without sickness.
4 homes had 4 canaries without sickness.
10 homes had 2 goldfish without sickness.
1 home had 5 geese without sickness.

1 home had 10 ducks without sickness.
1 home had 10 pigeons without sickness.
(*b*) 6 homes had 14 hens with sickness.
6 homes had 6 hens with sickness.
(*c*) 4 homes had 4 dogs with paralysis.
4 homes had 12 hens with paralysis.
(*d*) 2 homes had deaths in 2 dogs.
6 homes had deaths in 6 cats.
8 homes had deaths in 42 hens.
2 homes had deaths in 2 horses.

Total, 34 homes out of 110 had illness, paralysis or death in 82 animals near the time of the human paralysis.

As to paralysis in domestic animals, a veterinary surgeon, Dr. A. W. May, was employed by the Board in the autumn of 1910 to visit kennels, poultry farms, veterinary hospitals, etc., through as much of the State as possible, in order to see if the distribution of animal paralysis corresponded to that of the human disease. His report will be published separately.

Other data, not given in former reports, follow: —

Nativity.

	Cases.
American,	315
French Canadian,	33
French,	51
French American,	5
Irish American,	65
Polish,	19
Portuguese,	13
Hebrew,	15
Italian,	11
English,	9
English American,	2
Irish,	4
French-Irish,	2
Colored,	6
Swedish,	15
German American,	6
Greek,	5
Finlander,	2
Nova Scotian,	2
Scotch,	4
Austrian,	1
Bohemian,	1
Not stated,	15
	601

This table is important as showing that the apparent partial immunity of the colored race may be less true than had been supposed, the relative incidence in Massachusetts in 1910 per thousand of population being in the colored race .17, and in the white .20. In order to obtain the incidence among the colored race in a community thoroughly infected, this was calculated for Springfield, where, in a colored population of 1,294, there occurred 4 cases, an incidence of 3.09 per thousand, while in the white population of the same city the incidence was 1.99 per thousand.

Communicability.

The question of communicability is probably obscured by the existence of abortive cases. The data here presented were established with all possible care. In 200 cases there was certain direct contact with an acute case in 32 cases, indirect contact in 10, and direct contact with a possible abortive case in 4. Out of 186 families, 13 had 2 cases and 1 family had 3.

There were no lodgers in 176 families of 186 investigated in this regard, and 18 lodgers in the 10 other families.

Conditions preceding the Attack.

Swimming and *Wading.* — Out of 524 cases when the question was answered, it was stated that 15.8 per cent. of the patients were swimming, wading or paddling in water just before the attack, while the remainder were not.

In 1909, out of 150 cases, 40.8 per cent. gave such a history on account of the different locality investigated last year, which may serve as a reminder that in estimating the possible effect of etiological factors too much importance cannot be attached to investigations confined to one locality.

Exposure to heat, cold or *dampness* just preceding the attack occurred in the history of 27 per cent. of 575 cases and was absent in the rest.

An *accident, fall* or *overexertion* was noted in 23 per cent. of 573 cases just before the attack.

Diet.

The majority of the patients ate of several kinds of food. In the analysis of a series of 200 cases studied in and around Springfield, 4 babies, all under six months, were said to be fed on breast milk alone. The other data as to diet were not apparently of especial interest, many articles of food being given, from a study of which no conclusive data can be drawn.

By Age Periods.

	Cases.	Per Cent. Approximate.
From birth to twelve months, inclusive,	51	8.5
From thirteen months to twenty-three months, inclusive,	65	
Two years old,	61	
Three years old,	98	
Four years old,	69	
Five years old,	51	65.5
	395	
Six to ten years, inclusive,	93	80.8
	488	
Eleven to twenty years, inclusive,	69	92.1
	557	
Twenty-one to thirty years, inclusive,	28	
Thirty-one to eighty years, inclusive,	15	
	600	

It is evident by a comparison with the table for 1909, that in 1910 a larger number of older children were attacked, the percentage of all cases from one to ten inclusive being 87.48 in 1909, while in 1910 only 80.8 per cent. of the same age were attacked.

Mortality by Age.

	Cases.	Deaths.	Mortality (Per Cent.).
Under one year,	38	3	7.89
One to ten years,	451	39	8.64
Over ten years,	112	12	10.71
Total,	601	54	–
Average mortality,	–	–	8.98

The total mortality was 1 per cent. higher than in 1909.

INCIDENCE OF THE DISEASE.

Sex. — There were 331 males and 270 females affected.

The condition of the patient preceding the attack was given in 540 cases; in about 30 per cent. the patient had been perfectly well and in about 60 per cent. some abnormal condition existed either some time before or just previous to the attack. Malaise existed in about 20 per

cent., affection of the throat or respiratory passages in 9 per cent., gastric or intestinal disturbance in 11 per cent. and in the remainder a variety of illnesses, the only group of significance being 10 cases where operation, wounds or sores preceded the attack. A study of the *recent illnesses in members of the same family* showed nothing of apparent importance, a moderate number of ordinary illnesses being recorded, chiefly of the upper respiratory passages and digestive tract.

General Features of Acute Attack for 601 Cases.

540 cases give history of fever.
487 cases give history of pain and tenderness.
284 cases give history of brain symptoms.
209 cases give history of retraction.
92 cases give history of sore throat.
2 cases give history of nystagmus.
1 case gives history of hiccough.

Digestive disturbance during the attack occurred in about 75 per cent. of the cases, this disturbance being nausea and vomiting, constipation or diarrhœa, with colic in a few cases.

Disturbance of the bladder did not occur in 73 per cent. of the cases, but retention was noted in 20 per cent. of the cases and other minor disturbances in the remainder.

Pain and Tenderness.

	Cases.
Pain or tenderness was present in	469
Pain or tenderness was absent in	42
Pain or tenderness was not stated in	90
	601

Pain or Tenderness lasted.

	Cases.
No pain,	42
One day or less,	9
Two days,	14
Three days,	20
Four days,	15
Five days,	10
Six days,	6
One week,	35
One to two weeks,	41
Two to three weeks,	32

	Cases.
Three to four weeks,	18
Four to five weeks,	8
Five to six weeks,	4
Eight to nine weeks,	5
Nine to ten weeks,	1
A few days,	25
Until death,	45
Present when report made,	181
Not stated,	90
	601

Appearance of Paralysis in Days and Weeks after Onset of Fever.

	Cases.
Same day,	20
One day,	31
Two days,	40
Three days,	34
Four days,	15
Five days,	11
Six days,	11
Seven days,	14
Eight days,	4
Nine days,	2
Ten days,	2
Eleven days,	2
Twelve days,	4
Thirteen days,	1
Fourteen days,	1
Two to three weeks,	5
Three to four weeks,	1
Four to five weeks,	1
Eight weeks,	1
	200

Distribution of Early Paralysis.

	Cases.
One leg only,	145
Both legs only,	146
One arm only,	44
Both arms only,	12
One arm and leg, same side,	50
One arm and leg, opposite sides,	18
Both legs and one arm,	32
Both arms and one leg,	8
Both arms and both legs,	51

	Cases.
Ataxia (transitory),	7
Back,	79
Abdomen,	38
Neck,	13
Respiration,	39
Deglutition,	12
Intercostal,	1
Face,	7
Right face,	31
Left face,	24
Strabismus,	2
Not stated,	32

Nine cases out of 200 gave a history of some *skin eruption* appearing on the chest or around the neck, or about the girdle.

In one or two such cases there was noted by the investigator a small maculo-papular rash, — a faint blush underlying the area with no definite redness to base of vesicle.

Prognosis.

Up to the time of assembling the Board's report (a period of six months after the beginning of the epidemic outbreak in western Massachusetts), 27 cases (13.5 per cent.) out of 200 had completely recovered.

A study of the age, distribution of the early paralysis and duration of tenderness and paralysis in these cases leads to the conclusion that the early symptoms offered no means of distinguishing them from cases where the paralysis was to be permanent.

Conclusions.

The disease in Massachusetts was nearly as prevalent in 1910 as in the previous year, and affected 153 cities and towns instead of 136, as in 1909. But one must remember that a much larger proportion of cases is now recognized and reported in Massachusetts than was formerly the case, so that probably the apparently relative prevalence of the disease in Massachusetts when compared to other States, the total number of cases in the State and the apparent spread are in some measure due to the alert attitude of the medical profession of this State in recognizing and reporting cases.

A large epidemic center existed in Springfield, with 148 cases in the city and a large number in the surrounding towns, the distribution appearing to be radial from Springfield. Another epidemic center existed in Fall River, with 89 cases in the city and more or less radial distribution to contiguous towns.

It is evident that the disease has existed in all classes in the community, and not only among the lower classes, from the report on the sanitary conditions under which the patient lived, and also that it exists under all conditions of sewage disposal and with all kinds of water supply. Our researches in the last two years have failed to show an excessive amount of dust in affected localities.

The proportion of affected houses in which contemporaneous sickness, paralysis or death existed in domestic animals or birds still seems larger than one would naturally expect.

The occurrence of 6 cases in the colored race is of importance in connection with the data of other investigators, who have found the race rarely affected.

The facts given with regard to communicability are to be regarded as important, 42 such histories having been obtained in 200 cases.

No definite information as to any one factor is to be found in the antecedents of the attack, since bathing, falls, exposure to heat, overexertion, etc., are common occurrences in children of the affected age in the summer season; nor in the study of diet does there seem much of importance except for the existence of the disease in 4 nursing babies.

The fact has been commented on that the disease was a little more prevalent this year in older children than in 1910.

The study of the immediate antecedents of the attack and the early symptoms show nothing of especial present interest except the very common occurrence of pain and tenderness, and the information as to its duration is of value.

The distribution of paralysis was made by a skilled investigator in a group of cases carefully studied, and it is important to note under those conditions the comparatively frequent involvement of the back, abdomen, neck and face, — a matter often overlooked.

The per cent. of total recoveries from the paralysis within a period of six months and less after the attack was 13.5 in 200 cases, as against a per cent. of 16.7 in a similar class of cases in 1909.

For the year 1911 the State Board of Health intends to pursue the same investigation as in the four previous years, on a more extended scale, hoping by a study of the disease in one locality over a term of years to reach some conclusions as to its characteristics.

As in former years the Board is under great obligations to the medical profession for their ready co-operation at all points, and asks for the coming year the same ready assistance.

ANTERIOR POLIOMYELITIS.[1] — ATTEMPTS TO TRANSMIT THE DISEASE TO MONKEYS BY INOCULATION WITH THE NASAL, PHARYNGEAL AND BUCCAL SECRETIONS OF EIGHTEEN HUMAN CASES.

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We lack definite information concerning the mode of transmission of epidemic poliomyelitis. Such information is of fundamental importance from the practical standpoint of preventing the spread of the disease. Flexner and Lewis have shown that the virus may be obtained in the nasal and pharyngeal mucosa of monkeys, and it has been assumed that the virus leaves the body in the secretions of the mouth and the nose; the mode of entrance is perhaps through the nasal and pharyngeal mucosa. This view is strengthened by the known facts in a somewhat analogous infection, — epidemic cerebro-spinal meningitis.

We have undertaken this work to determine whether the virus of epidemic poliomyelitis may be demonstrated in the nasal, pharyngeal and buccal secretions of patients in various stages of the disease, in convalescents, or in suspected carriers.

The methods employed were as follows: —

Collection of Material.

The specimens were all personally obtained by one of us (P. A. E. S.). The patient was taken just as he was found, without being cleaned up at all, but the usual antiseptic precautions were employed by the operator, and all instruments and appliances were sterilized.

Each specimen was collected in a sterile vial. The salt solution used to wash the mucous membranes of the nose and throat was practically normal and was freshly made for each case. The instruments used were a Goodale syringe, a nasal douche, nasal forceps and applicators.

To secure the specimen the patient was seated directly before the operator and first instructed to gargle with a mouthful of salt solution, which was then secured in a sterile bottle; next the nasal douche was filled with salt solution and used alternately in each nares as follows: —

With the patient's head slightly tipped back, until the floor of the nares is approximately horizontal, the salt solution is allowed to flow in gently.

[1] Report to the State Board of Health of Massachusetts, February, 1911. Reprinted from "Boston Medical and Surgical Journal," May 25, 1911.

The douche is then removed, the nares closed with the thumb and finger of the operator. The head of the patient is next brought forward as far as necessary to allow the salt solution to run out through the opposite nares (this is brought about by releasing pressure on the appropriate side), and the fluid is caught in the sterile bottle. In order to expel the last portions of salt solution, and at the same time to remove the residual mucus and nasal secretion, the patient is instructed to blow gently through the open nostril. The procedure is then repeated on the other side. The applicator, tipped with sterile absorbent cotton, is used repeatedly along the floor of the nasal cavities and gently passed back into the pharynx in order to clean up and remove those portions of mucous and nasal secretions which cannot be obtained by simple irrigation. The mouth is now swabbed with sterile absorbent cotton; or, if the patient is old enough to understand, he is instructed to chew the pledget of absorbent cotton, this being done in order to secure the saliva. If the tongue is at all coated, some of this material is wiped off as well.

The Goodale syringe, filled with salt solution, is now introduced into the mouth and passed back gently until the tip is inserted under the uvula, and directed upward and forward into the pharyngeal vault, when the contents of cylinder (containing about 3 cubic centimeters salt solution) is expressed quickly and the syringe withdrawn. The vestibules of the nasal cavities having previously been plugged with sterile absorbent cotton, the head of the patient is lowered immediately, to allow the salt solution to drain into the absorbent cotton. These pledgets of cotton are added to the other secretions in the sterile bottle, and the patient is instructed to blow gently, first through one, then through the other nostril, into the collecting bottle. The applicator, tipped with cotton, is again brought into play in order to clean up the cavities still further. This process is repeated two or three times in each case, until the cavities are fairly well cleared out, the end in view in every case being to secure a large amount of material with as little discomfort as possible to the patient.

Experimental Technic.

The material thus collected was cooled and brought without delay to the laboratory, packed in ice. It was then passed through a Berkfeld filter, warmed to about 30° C., and injected into the brain and peritoneal cavity of monkeys (Macacus Rhesus).

A small gimlet hole was bored in the skull on each side over the frontal lobes (under ether anesthesia). About 4 cubic centimeters of the filtrate was then introduced into each cerebral hemisphere and the remainder was injected into the peritoneal cavity.

A brief account of the 18 cases follows: —

Case No. 1.

F. F., age five, male, American, living in Springfield, Mass. Sanitary condition of dwelling good. No other case in the family. The boy appeared to be well developed and nourished, and, the mother says, was always healthy.

Acute febrile attack Sept. 25, 1910, followed by paralysis of the muscles of deglutition and vocal cords, with aphonia on the sixth day.

The general features of the acute attack were nausea and vomiting, starting on the morning of September 25, and recurring at intervals during the next twenty-four hours, temperature of 103° F., restlessness and wandering of mind, pain and tenderness lasting a few days in the neck muscles and right leg, sore throat and aphonia, persistent constipation.

On September 13 (twelve days before the acute febrile attack), tonsils and adenoids were removed at a Springfield hospital.

The boy was first seen by one of us early in October, 1910. He was in a very nervous condition and all reflexes were exaggerated. He could swallow with difficulty, though his voice was returning. The throat was slightly injected and there was some bronchial cough.

On November 5, when the specimen was secured for inoculation, he was still very nervous, and the throat symptoms persisted, but the paralysis had practically disappeared.

Monkey (*1*). — On Nov. 5, 1910, 4 cubic centimeters were injected into right brain, 4 cubic centimeters into left brain, and 50 cubic centimeters into peritoneal cavity. Normal recovery from the anesthesia. Never showed any suspicious symptoms, though on November 11 temperature was 103.3° F. Dismissed from observation Feb. 2, 1911.

Case No. 2.

D. Y. (American born of Scotch parents), age five, living in Ludlow, Mass. Sanitary condition of dwelling good. No other case in family. Had scarlet fever and was in Springfield Isolation Hospital from Aug. 6 to Sept. 24, 1910, a period of seven weeks, during which time there were cases of anterior poliomyelitis in the same isolation hospital. During his stay there the child had a bad sore throat and several cultures were taken, all of which proved to be negative for the diphtheria bacillus.

Patient returned to Ludlow September 24, and two weeks later (October 7) acute febrile attack developed, followed two days later by paralysis of right arm and both legs.

The general features of acute attack were: nausea and vomiting, fever, 102° F., retraction of head, brain symptoms (listless and stupid), pain in head, which had lasted two days when paralysis of right arm and both legs appeared. Urine was negative. Vomiting and diarrhœa accompanied the febrile attack, and the diarrhœa continued for several weeks, being followed finally by constipation.

On November 5 (four weeks after his febrile attack) specimen was se-

cured for inoculation. The child was still in bed, with a temperature of 101° F. There was bronchial cough, the throat was slightly injected and paralysis of both legs and right arm persisted.

Monkey (*2*). — On Nov. 5, 1910, 4 cubic centimeters were injected into right brain, 4 cubic centimeters into left brain, and 85 cubic centimeters into peritoneal cavity. The animal recovered promptly from the operation and never showed suspicious symptoms. November 10, temperature 104.8° F. Dismissed from observation Feb. 1, 1911.

Case No. 3.

V. P., age four, female, born of American parents, living in Springfield, Mass. Well developed and nourished. Sanitary condition of dwelling good. No other case in the family.

Acute attack Oct. 11, 1910, with fever, pain and tenderness along spine. Paralysis developed seventy-two hours later, involving both legs.

On November 5, when specimen was obtained for inoculation, the child was in good health; the walk was ataxic.

Monkey (*3*). — On Nov. 5, 1910, 4 cubic centimeters were injected into right brain, 4 cubic centimeters into left brain, and 50 cubic centimeters into the peritoneal cavity. Monkey recovered well from the anesthesia and remained lively and apparently well. Dismissed from observation Feb. 1, 1911.

Case No. 4.

T. C. (American born of Irish parents), age eighteen, female, living in Springfield, Mass. Sanitary condition of dwelling good. No other case in the family. T. C. well developed and before onset was well nourished.

Acute febrile attack occurred Aug. 18, 1910, and the next day paralysis of both legs, both arms, back and abdomen developed.

The general features of the acute attack were sudden fever, 104° F., intense pain and tenderness in the back and lower extremities, lasting six weeks, together with marked change of temperament, — irritability. On the second day of attack patient voided a clear green urine with a trace of albumen.

On November 5, when the specimen was taken, the paralysis of both legs and both arms still persisted, and there was slight involvement of intercostals, so that she could not cough properly. She was apathetic and weak, but had recovered in large measure her sunny disposition.

Monkey (*4*). — On Nov. 5, 1910, 4 cubic centimeters were injected into right brain, 4 cubic centimeters into left brain, and 75 cubic centimeters into peritoneal cavity. Recovered promptly from the operation, but on November 7 (two days later) was unusually quiet, did not climb and hid his face. The next day (November 8) the temperature was 102.5° F., and he was placed in a separate cage. On November 9 his disposition seemed changed, he did not express fear and could be approached without being excited. No paralysis; walked on four legs. On November 10 he seemed weak and dazed, and temperature was 101.4° F. On November 11 would not eat except when

fed by hand; pupils equal, reacted to light; temperature, 100.4° F. Hand and wrist on right side weaker. November 12, general weakness, moved in circles to the left, head and eyes turned to the left; temperature, 98° F. Died November 13, 3 P.M. Autopsy showed a hemorrhage in the right anterior lobe in the white matter, with pus in the left brain near the motor area for the arm. Cortex was markedly congested, the dura apparently normal.

Case No. 5.

R. T., age five, male (American born of Irish parents), living in Springfield, Mass. Sanitary condition of dwelling bad. Patient well developed and nourished. No other case in family.

Acute attack Oct. 6, 1910, with high fever and sore throat. Paralysis of both legs developed a week later.

On November 5, when specimen was obtained for inoculation, paralysis was disappearing. Tonsils were still swollen, however, and there was some bronchial cough.

Monkey (*5*). — On Nov. 5, 1910, 4 cubic centimeters were injected into right brain, 4 cubic centimeters into left brain, and 65 cubic centimeters into peritoneal cavity. The animal recovered promptly from the anesthetic, but the next morning did not use right arm, which hung limp; tendency to lean towards right. November 7, both the right arm and the right leg were weak; would not eat. On November 9 he ate better and used right leg somewhat, but right arm was still limp; temperature, 102° F. The condition improved somewhat, but the lameness of right arm and right leg persisted. It is most probable that the paralysis was the result of mechanical injury at the time of the operation. Dismissed from observation Feb. 2, 1911.

Case No. 6.

A. L. T., age five, male, American, living in Middleborough, Mass. Sanitary condition of dwelling good. No other case in the same family, but younger brother was sick with dysentery about the same time. Lived an out-of-door life. For a couple of weeks before onset was fussy and irritable.

Acute attack Oct. 25, 1910, with the following general features: fever ranging from 100° to 104° F., delirium, pain and tenderness general, but more pronounced in legs; disturbance of vision and speech lasting two days; inclined to jump and twitch; reflexes absent. Paralysis appeared two days after onset, involving the left leg.

On November 13, when specimen for inoculation was obtained, patellar reflex was absent. Paralysis of left leg persisted. General condition improved.

Monkey (*6*). — On Nov. 13, 1910, 4 cubic centimeters were injected into right brain, 4 cubic centimeters into left brain, and 50 cubic centimeters into peritoneal cavity. Recovered promptly from the operation. On November 15 developed nervous symptoms, with irritability, and nodding of head when disturbed. Was held by the other monkeys as though ill. The nervous

symptoms gradually disappeared, but the monkey became weaker, — refused to eat. Chloroformed November 9. Autopsy showed an old tuberculous lesion of the lung, with a generalized tuberculosis throughout the abdominal organs.

Case No. 7.

E. H. W., age eight, male (American born of Scotch parents), living in Middleborough, Mass. Sanitary condition of dwelling good. No other case in the family at this time. Patient well developed and nourished.

Acute attack Sept. 17, 1910, preceded by vomiting, accompanied by fever (102° F.), frontal headache, pain and tenderness on left side, also right shoulder and arm, coryza, cough, constipation. Paralysis appeared five days later, involving the left leg. Slight difficulty in voiding urine.

On November 13, when the specimen was obtained for inoculation, patient was but slightly ataxic in his gait, paralysis was disappearing and general condition was distinctly on the mend.

Monkey (*7*). — On Nov. 13, 1910, 4 cubic centimeters were injected into right brain, 4 cubic centimeters into left brain, and 75 cubic centimeters into peritoneal cavity. Recovered well from the operation and soon began to climb and jump. November 15 exhibited trembling or shivering motions. Otherwise negative. Dismissed from observation Feb. 2, 1911.

Case No. 8.

K. J. W., age ten years, male (American born of Scotch parents), living in Middleborough, Mass. Older brother to the preceding case. Sanitary condition of dwelling good. In intimate contact with his brother during the course of his acute illness. Felt well, however, up to the day of acute attack, which occurred Nov. 3, 1910, with high fever, accompanied by pain and tenderness in back of neck, lasting forty-eight hours. There were also gastro-enteritis and vomiting. Paralysis of right leg was noticed on fourth day.

On November 13, when specimen was obtained for inoculation, leg was still paralyzed, the tonsils were injected and there were coryza and cough.

Monkey (*8*). — On Nov. 13, 1910, 4 cubic centimeters were injected into right brain, 4 cubic centimeters into left brain, and 50 cubic centimeters into peritoneal cavity. Recovered promptly from the operation, and nothing abnormal was noted subsequently. Dismissed from observation Feb. 2, 1911.

Case No. 9.

A. T. McE., age six years, female (American born of Irish parents), living in North Easton, Mass. Sanitary condition of dwelling fair. No other case in family. Onset Nov. 21, 1910, with coryza, fever, pain and tenderness in abdominal region. Paralysis of both legs appeared three days later.

On November 25, when specimen was obtained for inoculation, patellar reflexes were absent. Patient was unable to walk. Hyperesthesia and pain along spine were decreasing. Throat injected, tonsils swollen.

Gave history of having passed two round worms a few weeks before the acute onset.

Monkey (*9*). — On Nov. 25, 1910, 4 cubic centimeters were injected into right brain, 4 cubic centimeters into left brain, and 70 cubic centimeters into peritoneal cavity. Recovered promptly from the operation. On December 1 had a suspicious way of lifting the left forearm and wrist. This, however, soon passed away. Dismissed from observation Feb. 2, 1911.

Case No. 10.

Dr. R. (age about thirty-five), American, living and practicing in Springfield, Mass. Sanitary condition of dwelling excellent.

Specimen was taken from his nose and throat on Dec. 5, 1910, for the reason that he had seen and been associated with several cases of infantile paralysis. The object was to determine whether or not such persons could possibly act as carriers.

At the time of taking this specimen the doctor was in good health, but had a slight coryza.

Monkey (*10*). — On Dec. 5, 1910, 2 cubic centimeters were injected into right brain, 4 cubic centimeters into left brain, and 65 cubic centimeters into peritoneal cavity. Recovered well from the operation, but on second day trembled as though shivering from the cold. This symptom soon passed away, however. In a few days temperament seemed somewhat altered, was less wild, but no other suspicious symptoms developed. Dismissed from observation Feb. 1, 1911.

Case No. 11.

H. R., age three years, female, well developed and nourished, living in Springfield, Mass. Sanitary condition of dwelling excellent. Living at home with her father, a practicing and school physician.

A younger sister, age nine months, had an attack of poliomyelitis on July 15, 1910, resulting in a complete right hemiplegia.

Acute attack Nov. 23, 1910, with gastro-enteritis, vomiting, fever and pain in her left face. The next day paralysis of the left face was noticed.

On December 5, when the specimen for inoculation was secured, paralysis of the left face persisted, throat was injected and tonsils were enlarged. Otherwise, general condition of health good.

Monkey (*11*). — On Dec. 5, 1910, 4 cubic centimeters were injected into right brain, 4 cubic centimeters into left brain, and 60 cubic centimeters into peritoneal cavity. On December 6 seemed to be lame in right leg and had a tendency to fall to the right side. Pupils equal and reacted to light. Did not exhibit usual fear and refused to eat. On December 7 seemed delirious and moved continually in circles to the right. The condition gradually improved so that by December 14 the monkey climbed and jumped much as usual, but still exhibited lameness of right arm. Chloroformed December 21, and near the right motor area was found a blood clot, which accounted for the paralysis.

Case No. 12.

M. B., age twenty-one, female, American, living in Springfield, Mass. Sanitary condition of dwelling good. No other case in family. Library assistant, well developed and nourished.

Acute attack Dec. 4, 1910. Slight rise of temperature, marked change of temperament, pain and tenderness in the neck, paralysis of right face and neck. For three or four weeks before onset, constipation, which still persists.

On December 8, when specimen was obtained for inoculation, paralysis of right face was still present. Throat injected, tonsils hypertrophied, adenoids present, lower turbinates swollen, injected and bleed easily.

Monkey (*12*). — On Dec. 8, 1910, 4 cubic centimeters were injected into right brain, 4 cubic centimeters into left brain, and 60 cubic centimeters into peritoneal cavity. Recovered promptly from the anesthetic and never showed suspicious symptoms. Dismissed from observation Feb. 2, 1911.

Case No. 13.

S. S., age two years three months, male, Hebrew, living in Chelsea, Mass. Sanitary condition of dwelling fair.

Acute attack Dec. 10, 1910, with fever, coryza, bronchial cough, pain and tenderness in right knee. Paralysis appeared on the same day, involving the right leg. Child well developed and nourished.

On December 15, when specimen was obtained for inoculation, paralysis had disappeared.

Monkey (*13*). — On Dec. 15, 1910, 4 cubic centimeters were injected into right brain, 4 cubic centimeters into left brain, and 20 cubic centimeters into peritoneal cavity. (In disconnecting the filter, the cotton plug was sucked in, and for fear of contamination this material was again passed through a Berkfeld filter.) Recovered promptly from the anesthesia and never showed suspicious symptoms. Dismissed from observation Feb. 2, 1911.

Case No. 14.

A. B., age twelve months, female, French-Canadian, living in Lawrence, Mass. Sanitary condition of dwelling poor.

Acute attack Dec. 8, 1910, with fever and sore throat. Three weeks previously, the child had spells of vomiting lasting for two days, and was generally peevish, then seemed to be in good health up to date of onset. Paralysis involving the left arm appeared on December 9.

On December 15, when specimen was secured, child was in fair health, except for the paralysis. She was constipated, however, and throat was sore and injected, tonsils were enlarged and reddened, and there was some cough.

Monkey (*14*). — On Dec. 16, 1910, 4 cubic centimeters were injected into right brain, 4 cubic centimeters into left brain, and 20 cubic centimeters into peritoneal cavity. Recovered slowly but completely from the operation, and never showed suspicious symptoms. Dismissed from observation Feb. 2, 1911.

Case No. 15.

M. F. B., age nine months, female (American born, French-Canadian parents), living in Wakefield, Mass. Sanitary condition of dwelling fair. No other case in family. A well developed and nourished child. Breast fed until one month before onset, when she was partially weaned and given cow's milk and baked potatoes.

Acute attack, Dec. 15, 1910, with fever, brain symptoms, vomiting, convulsions, pain and tenderness. Paralysis of right leg, right arm and right face appeared two days later.

On December 18, when specimen was secured, the child was unconscious. She died on December 20. Autopsy refused.

Monkey (15). — On Dec. 19, 1910, 4 cubic centimeters were injected into right brain, 4 cubic centimeters into left brain, and 50 cubic centimeters into peritoneal cavity. Recovered promptly from the operation and never showed suspicious symptoms. Dismissed from observation Feb. 2, 1911.

Case No. 16.

T. G., age twenty-three years, male, Italian, living in Southbridge, Mass. Sanitary condition of dwelling fair. Patient well developed but poorly nourished.

Acute attack Dec. 27, 1910, with fever, pain and tenderness on the right, a week later extending to the left side, along the spine and the extremities, profuse sweating and evidences of vasomotor change of lower extremities.

Paralysis appeared at time of onset, and involved at first only the thumb and index finger of the right hand. The next day paralysis invaded the right forearm and arm, thence extending to the right leg, where it was complete. It lasted only two days, however, during which period no reflexes could be obtained.

January 10, when the specimen was secured, all the reflexes were exaggerated on the right, and diminished on the left side. There was no rise of temperature. Tongue clean, tonsils enlarged, soft palate and uvula congested and slightly edematous, noticeable change of temperament.

Monkey (16). — On Jan. 10, 1911, 3 cubic centimeters were injected into right brain, 4 cubic centimeters into left brain, and 30 cubic centimeters into peritoneal cavity. Recovered slowly from the anesthesia and never showed suspicious symptoms. Dismissed from observation February, 1911.

Case No. 17.

G. S., age seven years, female, American, living in Ware, Mass. Sanitary condition of dwelling excellent. No other case in the family. Attended public school and there occupied a seat immediately behind a boy who, just previous to her attack, was out of school with poliomyelitis.

Onset Dec. 11, 1910. No fever. Paralysis appeared the same day, involving both legs. Pain and tenderness, more pronounced in the thighs, were

a marked feature. Hiccough frequent and persistent since attack. For a week or ten days before her attack the mother remarked a peculiar change of temperament.

On Jan. 12, 1911, when specimen was secured, she was completely recovered, throat normal, tonsils slightly hypertrophied, otherwise a normal child.

Monkey (17). — On Jan. 13, 1911, 4 cubic centimeters were injected into right brain, 4 cubic centimeters into left brain, and 30 cubic centimeters into peritoneal cavity. Recovered promptly from the operation and never showed suspicious symptoms. Dismissed from observation February, 1911.

Case No. 18.

W. C., age nineteen months, male, French-American, living in Ware, Mass. Sanitary condition of dwelling fair. No known history of contact with any other case.

Acute attack on Jan. 1, 1911, with vomiting, accompanied with convulsions and diarrhœa, fever, stupor, retraction of head, rigidity of right arm and right leg. Paralysis followed eight days later, involving right arm and right leg.

On Jan. 12, when specimen was secured, the baby was moribund, reflexes were absent on both sides, though the child could move its legs and arm. Nystagmus, tongue heavily coated, throat injected, tonsils hypertrophied. Died on Jan. 18, 1911. Autopsy refused.

Monkey (18). — On Jan. 13, 1911, injected 4 cubic centimeters into right brain, 4 cubic centimeters into left brain, and 10 cubic centimeters into peritoneal cavity. Recovered promptly from the anesthesia and never showed suspicious symptoms. Dismissed from observation February, 1911.

Summary and Conclusions.

The fact that the virus of epidemic poliomyelitis was not demonstrated in the buccal and nasal and pharyngeal secretions of these 18 cases is not proof that it may not have been there. In any event, the virus would have been greatly diluted, owing to the relatively large amount of salt solution used to wash the mucous membrane. Furthermore, under the conditions of the experiment the virus may have been so attenuated as to be incapable of infecting monkeys.

It is well known that a considerable quantity of the virus from the central nervous system of man is sometimes required to initiate the infection in monkeys.

Our results must not be construed as in any sense disproving the assumption that the infection in this disease may be discharged from the mucosa of the upper respiratory passage and enter through the same channel.

	Epidemiological and Clinical Data.						*Experimental Data.*			
Case.	Condition before Onset.	Date of Onset.	Character of Onset.	Date of Paralysis.	Extent of Paralysis.	Condition of Patient when Specimen taken.	Time after Onset when Specimen taken.	Monkey.	Amount of Filtrate injected, and Sites.	Results.
F. F. Male. Age, five years.	Sore throat.	Sept. 25, 1910.	Gastro-intestinal upset, with fever.	Oct. 1, 1910.	Muscles of deglutition and vocal cord. Complete aphonia.	Nervous, sore throat, paralysis disappeared.	Six weeks (*i.e.*, on Nov. 5, 1910).	No. 1.	4 ccm. Right brain. 4 ccm. Left brain. 50 ccm. Peritoneum.	Negative.
D. Y. Male. Age, five years.	Sore throat. Convalescing from scarlet fever.	Oct. 7, 1910.	Gastro-intestinal upset, with fever.	Oct. 9, 1910.	Complete. Right arm and both legs.	Complete paralysis right arm and both legs, fever, cough and weak.	Four weeks (*i.e.*, on Nov. 5, 1910).	No. 2.	4 ccm. Right brain. 4 ccm. Left brain. 85 ccm. Peritoneum.	Negative.
V. P. Female. Age, four years.	In good health.	Oct. 11, 1910.	Febrile.	Oct. 13, 1910.	Complete of both legs.	Recovering from paralysis, walks, slightly ataxic gait.	Three weeks (*i.e.*, on Nov. 5, 1910).	No. 3.	4 ccm. Right brain. 4 ccm. Left brain. 50 ccm. Peritoneum.	Negative.
T. C. Female. Age, eighteen years.	In good health.	Aug. 18, 1910.	Sudden chill. Fever. No prodromal symptoms.	Aug. 19, 1910.	Both legs and both arms, back, abdomen, intercostals.	Paralysis persists, atrophy.	Six weeks (*i.e.*, on Nov. 5, 1910).	No. 4.	4 ccm. Right brain. 4 ccm. Left brain. 75 ccm. Peritoneum.	Paralysis right arm. Died seventh day. Abscess in left motor area.
R. T. Male. Age, five years.	In good health.	Oct. 6, 1910.	Febrile.	Oct. 20, 1910.	Both legs.	Coryza.	Four weeks (*i.e.*, on Nov. 5, 1910).	No. 5.	4 ccm. Right brain. 4 ccm. Left brain. 65 ccm. Peritoneum.	Paralysis right arm (mechanical).

Case.	Condition before Onset.	Date of Onset.	Character of Onset.	Date of Paralysis.	Extent of Paralysis.	Condition of Patient when Specimen taken.	Time after Onset when Specimen taken.	Monkey.	Amount of Filtrate injected, and Sites.	Results.
Epidemiological and Clinical Data — Concluded.						*Experimental Data* — Concluded.				
A. L. T. Male. Age, five years.	Irritable for two weeks.	Oct. 25, 1910.	Febrile. Delirium and pain.	Oct. 27, 1910.	Left leg.	Paralysis persists. Reflex absent.	Two weeks (*i.e.*, on Nov. 13, 1910).	No. 6.	4 ccm. Right brain. 4 ccm. Left brain. 50 ccm. Peritoneum.	Nervous symptoms on third day, became very weak and died on twenty-fifth day. Generalized tuberculosis.
E. H. W. Male. Age, eight years.	In good health.	Sept. 17, 1910.	Febrile. With pain and vomiting; coryza.	Sept. 22, 1910.	Left leg.	Paralysis disappearing, ataxic gait improving.	Seven weeks (*i.e.*, on Nov. 13, 1910).	No. 7.	4 ccm. Right brain. 4 ccm. Left brain. 75 ccm. Peritoneum.	Negative.
K. T. W. Male. Age, ten years.	In good health.	Nov. 3, 1910.	Febrile. With gastro-enteritis; pain.	Nov. 7, 1910.	Right leg.	Paralysis persists. Coryza and cough.	Ten days (*i.e.*, on Nov. 13, 1910).	No. 8.	4 ccm. Right brain. 4 ccm. Left brain. 50 ccm. Peritoneum.	Negative.
A. T. McE. Female. Age, six years.	Passed two round worms two weeks before attack.	Nov. 21, 1910.	Febrile. With coryza and pain.	Nov. 23, 1910.	Both legs.	Paralysis persists. Reflex absent, pain diminished, throat injected, tonsils swollen.	Five days (*i.e.*, on Nov. 25, 1910).	No. 9.	4 ccm. Right brain. 4 ccm. Left brain. 70 ccm. Peritoneum.	Negative.
Dr. R.[1] Male. Age, thirty-five years.	In good health.						Dec. 5, 1910.	No. 10.	2 ccm. Right brain. 4 ccm. Left brain. 65 ccm. Peritoneum.	Negative.

H. R. Female. Age, three years.	In good health.	Nov. 23, 1910.	Febrile. With pain.	Nov. 24, 1910.	Left face.	Paralysis persists, throat injected, tonsils enlarged.	Twelve days (*i.e.*, on Dec. 5, 1910).	No. 11.	4 ccm. Right brain. 4 ccm. Left brain. 60 ccm. Peritoneum.	Paralysis right leg and arm, brain symptoms. Chloroformed sixteenth day. Blood clot in left motor area.
M. B. Female. Age twenty-one years.	In good health.	Dec. 4, 1910.	Febrile. With marked change of temperament.	Dec. 4, 1910.	Right face.	Paralysis persists, pain.	Fourth day (*i.e.*, on Dec. 8, 1910).	No. 12.	4 ccm. Right brain. 4 ccm. Left brain. 60 ccm. Peritoneum.	Negative.
S. S. Male. Age, two years, three months.	In good health.	Dec. 10, 1910.	Febrile. With coryza.	Dec. 10, 1910.	Right leg.	Cough, coryza. Paralysis disappeared.	Fifth day (*i.e.*, on Dec. 15, 1910).	No. 13.	4 ccm. Right brain. 4 ccm. Left brain. 20 ccm. Peritoneum.	Negative.
A. B. Female. Age, twelve months.	Vomiting and peevish.	Dec. 8, 1910.	Febrile.	Dec. 9, 1910.	Left arm.	Paralysis persists.	Seventh day (*i.e.*, on Dec. 15, 1910).	No. 14.	4 ccm. Right brain. 4 ccm. Left brain. 20 ccm. Peritoneum.	Negative.
M. F. B. Female. Age, nine months.	Fretful, otherwise well.	Dec. 15, 1910.	Febrile. Vomiting and convulsions.	Dec. 17, 1910,	Right leg, right arm, right face.	Fever, convulsions. Paralysis persists.	Fifth day (*i.e.*, on Dec. 20, 1910).	No. 15.	4 ccm. Right brain. 4 ccm. Left brain. 50 ccm. Peritoneum.	Negative.
T. G. Male. Age, twenty-three years.	In good health.	Dec. 27, 1910.	Febrile.	Dec. 27, 1910.	Right arm; later, right leg.	Vasomotor disturbance, throat injected.	Two weeks (*i.e.*, on Jan. 10, 1911).	No. 16.	3 ccm. Right brain. 4 ccm. Left brain. 30 ccm. Peritoneum.	Negative.
G. S. Female. Age, seven years.	In good health.	Dec. 11, 1910.	Sudden. No fever.	Dec. 11, 1910.	Both legs.	In good health. Tonsils hypertrophied.	Four weeks (*i.e.*, on Jan. 12, 1911).	No. 17.	4 ccm. Right brain. 4 ccm. Left brain. 30 ccm. Peritoneum.	Negative.
W. C. Male. Age, nineteen months.	In good health.	Jan. 1, 1911.	Fever, stupor, retraction of head.	Jan. 8, 1911.	Right arm and right leg.	Moribund.	Eleven days (*i.e.*, on Jan. 12, 1911).	No. 18.	4 ccm. Right brain. 4 ccm. Left brain. 10 ccm. Peritoneum.	Negative.

[1] Suspected carrier.

Acts of 1911, Chapter 297, as amended by Acts of 1911, Chapter 534.

An Act relative to the transfer of certain powers from the cattle bureau of the state board of agriculture to the state board of health and to the appointment of inspectors of slaughtering.

Section 1. Section seven of chapter ninety of the Revised Laws is hereby amended by striking out the words "the board", in the first line, and inserting in place thereof the words: — The state board of health, — so as to read as follows: — *Section 7.* The state board of health may make regulations for the inspection of meat, which shall conform to the regulations of the United States bureau of animal industry for the inspection of meat for export and for interstate commerce.

Section 2. Section one hundred of chapter seventy-five of the Revised Laws is hereby amended by striking out the words "board of cattle commissioners", in the fifteenth line, and inserting in place thereof the words: — state board of health, — so as to read as follows: — *Section 100.* The mayor and aldermen, selectmen, or such other officers as they shall designate, or in a town having a population of more than five thousand, the board of health, if any, may annually issue licenses to carry on the business of slaughtering neat cattle, sheep or swine to applicants therefor. The fee for each license shall be one dollar. The license shall name the persons licensed to conduct such business, and the building or establishment in which it is to be carried on, and it shall continue in force until the first day of May of the year next ensuing, unless sooner forfeited or rendered void. A record shall be kept by the board or officers authorized to issue licenses of all applications for licenses under the provisions of the preceding section and of all licenses issued, which shall be evidence of the issue of any such license. Such board or officers shall annually, on or before the first day of June, send to the state board of health a copy of every application made to them under the provisions of the preceding section and their action thereon, and a list of all persons with their addresses, who although engaged in the business named in the preceding section on the last day of the previous April, failed to make application for a license.

Section 3. [As amended by Acts of 1911, chapter 534.] Section one hundred and one of chapter seventy-five of the Revised Laws, as amended by section three of chapter two hundred and ninety-seven of the acts of the year nineteen hundred and eleven, is hereby further amended by striking out the words "an inspector of the state board of health", in the fifth and sixth lines, and inserting in place thereof the words: — a member of the board of health or of an inspector appointed therefor by said board, — so as to read as follows: — *Section 101.* A licensee under the provisions of the preceding section shall not slaughter any such animals, or cause them to be slaughtered at such slaughter house or establishment, on any days other than those specified in the application for such license, except in the

presence of a member of the board of health or of an inspector appointed therefor by said board; but he may at any time change the days for slaughtering such animals, by giving at least seven days' written notice thereof to the board or officer authorized to issue licenses, who shall immediately give written notice of such change to such inspector of such city or town.

Section 4. Section one hundred and two of chapter seventy-five of the Revised Laws is hereby amended by striking out the words "board of cattle commissioners", in the seventh line, and inserting in place thereof the words: — state board of health, — so as to read as follows: — *Section 102.* Such inspector as has been appointed by the board of health shall be present at all licensed slaughter houses or establishments upon the days designated for slaughter by the licensee, as provided in the preceding section, and there carefully examine the carcasses of all animals at the time of slaughter. Such inspection shall be made in such manner and under such rules and regulations as the state board of health may determine and direct. If, in the opinion of an inspector, any carcass or any meat or product thereof is diseased, corrupted, unwholesome or unfit for food, he shall seize it and cause it to be destroyed, as provided in section seventy of chapter fifty-six.

Section 5. Section one hundred and three of chapter seventy-five of the Revised Laws, as set forth in chapter two hundred and twenty of the acts of the year nineteen hundred and three, and as amended by chapter four hundred and seventy-one of the acts of the year nineteen hundred and nine, is hereby further amended by striking out the words "cattle bureau of the state board of agriculture", in the twelfth line, and inserting in place thereof the words: — state board of health, — so as to read as follows: — *Section 103.* In a slaughtering establishment wherein inspection and branding are not carried on under the rules and regulations for the inspection of live stock and other products, established by the United States department of agriculture in accordance with acts of congress, the carcasses of animals slaughtered under the provisions of the four preceding sections shall at the time of slaughter, if not condemned, be stamped or branded by the inspector thereof in like manner as those inspected by the United States bureau of animal industry for interstate trade, by a stamp or brand designed for the purpose by the state board of health, which shall be furnished by it to the board of health of a city or town applying therefor. Such stamps shall be uniform in design throughout the commonwealth, but shall contain the name of the city or town in which they are used.

Section 6. [As amended by Acts of 1911, chapter 534.] For the purposes of this act inspectors shall be appointed, shall be compensated, and may be removed in accordance with the provisions of law relating to inspectors of animals, except that the appointment of such inspectors shall be made by the local boards of health and except that in respect to such inspectors the state board of health shall perform the duties and exercise the authority imposed

by law upon the chief of the cattle bureau of the state board of agriculture in respect to inspectors of animals. The first appointments under this act shall be made within thirty days after its passage.

Section 7. This act shall take effect upon its passage.

Acts of 1911, chapter 297, approved April 20; Acts of 1911, chapter 534, approved June 9, each act taking effect upon its passage.

Acts of 1911, Chapter 491.

An Act relative to the furnishing of drinking water on passenger trains.

Section 1. Every railroad car while in use for the transportation of passengers, upon a train running thirty miles or more, shall be provided with a sufficient quantity of pure drinking water in such place or places in the car as will be convenient for the passengers, and with individual drinking cups which shall be accessible to the passengers. No charge shall be made for the water or for the drinking cups. The water and cups supplied shall be subject to the supervision and approval of the state board of health; and the said board shall enforce the provisions of this act. Equivalent methods of furnishing drinking water free to the passengers may be provided, instead of the foregoing, provided that the same are approved by the state board of health.

Section 2. Violations of this act shall be punished by a fine of not less than twenty-five dollars for each trip made by a car used for transporting passengers and not provided with water and utensils for its distribution in accordance with the provisions hereof.

Section 3. This act shall take effect on the fifteenth day of June in the current year. [*Approved May 27, 1911.*

Acts of 1911, Chapter 506.

An Act to authorize the incorporation of medical milk commissions.

Section 1. For the purpose of supervising the production of milk intended for sick room purposes, infant feeding, use in hospitals and for other uses, any five or more physicians, duly authorized to practise medicine under the laws of this commonwealth may form a corporation in the manner provided by and subject to the provisions of chapter one hundred and twenty-five of the Revised Laws. The members of the board of health of any city or town in which such corporation is formed shall be ex officiis members of the corporation.

Section 2. The name of any corporation organized under the provisions of this act shall be "Medical Milk Commission of ", designating the name of the city or town in which such corporation is established, and in case more than one corporation shall be organized under this act in any city or town the subsequent corporation or corporations shall use the name designated herein, but shall indicate in such name its proper sequence

in incorporation by adding thereto the words "Number Two" or "Number Three" or as the case may be.

SECTION 3. No member of any corporation organized under this act shall receive directly or indirectly from such corporation, or from any dairyman or dairymen producing milk under agreement with the corporation, any salary or emolument or any compensation of any kind for any services rendered as a member of such corporation, or for any services rendered under the provisions of this act; and any member of such a corporation who shall receive any salary, emolument or compensation of any kind for such services shall be liable to a fine of one hundred dollars, and in addition thereto he shall be removed from his office as a member of said corporation and shall thereafter be disqualified from becoming a member of any corporation incorporated under the provisions of this act.

SECTION 4. Every corporation organized under this act shall have power to enter into agreements in writing with any dairyman or dairymen for the production of milk under the supervision of such corporation for the purposes named in section one and to prescribe in such agreements the conditions under which such milk shall be produced, which conditions, however, shall not fall below the standards of purity and quality for certified milk as fixed by the American Association of Medical Milk Commissions and the standards for milk now or hereafter fixed by the laws of the commonwealth.

SECTION 5. The working methods of any corporation organized under this act and the dairies in which milk is produced under contract with any such corporation shall at all times be subject to investigation by the state board of health.

SECTION 6. No person, firm, association or corporation shall sell or exchange, or offer or expose for sale or exchange as and for certified milk any milk which does not conform to the regulations prescribed by and bear the certification of a corporation organized under the provisions of this act. Any person, firm, association or corporation violating any provision of this section shall be guilty of a misdemeanor, and shall be liable to a fine of not more than one hundred dollars for each offence.

(*This bill, returned by the governor to the house of representatives, the branch in which it originated, with his objections thereto, was passed by the senate May 22, and, in concurrence, by the house of representatives May 31, the objections of the governor notwithstanding, in the manner prescribed by the Constitution; and thereby has the "force of a law".*)

MONTHLY BULLETIN

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Approved by
The State Board of Publication.

WEEKLY RETURNS OF DEATHS FROM CITIES AND TOWNS OF MORE THAN 10,000 POPULATION.

WEEK ENDING JUNE 3, 1911.

CITIES AND TOWNS.	Population. Census for 1910.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM—					
				Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	670,585	213	60	72	26	14	2	–	4
Worcester,	145,986	39	8	7	2	2	–	–	–
Fall River,	119,295	38	17	24	7	5	–	1	–
Lowell,	106,294	25	6	4	–	2	–	–	–
Cambridge,	104,839	27	5	7	1	2	1	–	2
New Bedford,	96,652	26	9	9	6	1	–	–	–
Lynn,	89,336	17	6	3	2	1	–	–	–
Springfield,	88,926	27	7	3	1	–	–	–	–
Lawrence,	85,892	18	9	8	4	2	–	–	–
Somerville,	77,236	20	6	2	–	2	–	–	–
Holyoke,	57,730	13	2	3	3	–	–	–	–
Brockton,	56,878	10	0	2	1	–	–	–	–
Malden,	44,404	9	–	2	–	1	–	1	–
Haverhill,	44,115	6	–	1	–	1	–	–	–
Salem,	43,697	14	5	–	–	–	–	–	–
Newton,	39,806	8	4	–	–	–	–	–	–
Fitchburg,	37,826	5	1	1	–	–	1	–	–
Taunton,	34,259	7	2	3	1	2	–	–	–
Everett,	33,484	7	1	1	–	–	–	–	–
Quincy,	32,642	3	1	2	–	1	–	1	–
Chelsea,	32,452	4	0	1	1	–	–	–	–
Pittsfield,	32,121	14	–	3	2	1	–	–	–
Waltham,	27,834	4	1	2	–	1	–	–	–
Brookline,	27,792	7	2	1	1	–	–	–	–
Chicopee,	25,401	6	2	2	1	–	–	–	–
Gloucester,	24,398	1	–	–	–	–	–	–	–
Medford,	23,150	3	–	2	–	2	–	–	–
North Adams,	22,019	3	2	–	–	–	–	–	–
Northampton,	19,431	6	0	–	–	–	–	–	–
Beverly,	18,650	7	2	1	–	1	–	–	–
Revere,	18,219	4	–	1	–	1	–	–	–
Leominster,	17,580	5	–	2	1	–	–	–	–
Attleborough,	16,215	5	3	1	1	–	–	–	–
Westfield,	16,044	3	–	2	–	2	–	–	–
Peabody,	15,721	–	–	–	–	–	–	–	–
Melrose,	15,715	1	–	–	–	–	–	–	–
Hyde Park,	15,507	5	1	1	1	–	–	–	–
Woburn,	15,308	2	0	–	–	–	–	–	–
Newburyport,	14,949	5	2	–	–	–	–	–	–
Gardner,	14,699	2	1	1	1	–	–	–	–
Marlborough,	14,579	3	0	–	–	–	–	–	–
Clinton,	13,075	3	–	1	1	–	–	–	–
Milford,	13,055	–	–	–	–	–	–	–	–
Adams,	13,026	0	–	–	–	–	–	–	–
Framingham,	12,948	2	0	–	–	–	–	–	–
Weymouth,	12,895	–	–	–	–	–	–	–	–
Watertown,	12,875	0	–	–	–	–	–	–	–
Southbridge,	12,592	0	–	–	–	–	–	–	–
Plymouth,	12,141	–	–	–	–	–	–	–	–
Webster,	11,509	1	0	1	1	–	–	–	–
Methuen,	11,448	1	1	–	–	–	–	–	–
Wakefield,	11,404	5	–	–	–	–	–	–	–
Arlington,	11,187	0	–	–	–	–	–	–	–
Greenfield,	10,427	6	2	3	2	–	1	–	–
Winthrop,	10,132	–	–	–	–	–	–	–	–
Recapitulation.									
Total of reporting towns,	2,542,346	620	162	177	67	42	5	3	6

WEEK ENDING JUNE 10, 1911.

CITIES AND TOWNS.	Population. Census for 1910.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —					
				Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	670,585	178	39	51	16	17	–	1	2
Worcester,	145,986	38	7	5	3	1	–	–	–
Fall River,	119,295	34	15	20	5	3	–	–	2
Lowell,	106,294	29	6	6	3	1	–	–	–
Cambridge,	104,839	28	5	12	4	2	2	–	–
New Bedford,	96,652	28	12	10	3	2	–	–	–
Lynn,	89,336	12	1	2	1	1	–	–	–
Springfield,	88,926	17	4	5	2	1	–	1	–
Lawrence,	85,892	20	5	9	3	3	–	–	–
Somerville,	77,236	19	5	8	4	3	–	–	–
Holyoke,	57,730	12	3	1	–	–	–	–	–
Brockton,	56,878	3	1	–	–	–	–	–	–
Malden,	44,404	6	–	1	–	1	–	–	–
Haverhill,	44,115	8	1	1	–	–	–	–	–
Salem,	43,697	8	1	1	–	–	–	–	1
Newton,	39,806	7	–	–	–	–	–	–	–
Fitchburg,	37,826	10	2	2	1	–	1	–	–
Taunton,	34,259	10	7	3	1	–	1	–	–
Everett,	33,484	8	0	3	3	–	–	–	–
Quincy,	32,642	11	3	1	–	1	–	–	–
Chelsea,	32,452	14	3	3	–	1	–	1	–
Pittsfield,	32,121	2	–	–	–	–	–	–	–
Waltham,	27,834	3	0	–	–	–	–	–	–
Brookline,	27,792	4	–	–	–	–	–	–	–
Chicopee,	25,401	8	3	1	–	–	–	–	–
Gloucester,	24,398	6	–	1	–	1	–	–	–
Medford,	23,150	5	1	3	1	1	–	–	–
North Adams,	22,019	5	2	1	–	–	–	–	–
Northampton,	19,431	6	0	1	–	1	–	–	–
Beverly,	18,650	3	2	–	–	–	–	–	–
Revere,	18,219	4	1	1	–	–	1	–	–
Leominster,	17,580	2	1	1	1	–	–	–	–
Attleborough,	16,215	5	0	–	–	–	–	–	–
Westfield,	16,044	2	–	–	–	–	–	–	–
Peabody,	15,721	–	–	–	–	–	–	–	–
Melrose,	15,715	4	1	–	–	–	–	–	–
Hyde Park,	15,507	4	1	–	–	–	–	–	–
Woburn,	15,308	4	1	–	–	–	–	–	–
Newburyport,	14,949	5	–	–	–	–	–	–	–
Gardner,	14,699	3	–	2	–	1	–	–	–
Marlborough,	14,579	2	0	–	–	–	–	–	–
Clinton,	13,075	2	–	1	–	1	–	–	–
Milford,	13,055	–	–	–	–	–	–	–	–
Adams,	13,026	2	2	2	–	1	–	–	–
Framingham,	12,948	1	0	–	–	–	–	–	–
Weymouth,	12,895	–	–	–	–	–	–	–	–
Watertown,	12,875	3	1	–	–	–	–	–	–
Southbridge,	12,592	1	1	1	–	–	–	–	–
Plymouth,	12,141	–	–	–	–	–	–	–	–
Webster,	11,509	5	3	2	–	2	–	–	–
Methuen,	11,448	1	1	–	–	–	–	–	–
Wakefield,	11,404	1	1	1	–	–	1	–	–
Arlington,	11,187	4	–	1	1	–	–	–	–
Greenfield,	10,427	3	1	–	–	–	–	–	–
Winthrop,	10,132	–	–	–	–	–	–	–	–
Recapitulation.									
Total of reporting towns,	2,542,346	600	143	163	52	45	6	3	5

WEEK ENDING JUNE 17, 1911.

CITIES AND TOWNS.	Population. Census for 1910.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —					
				Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	670,585	208	51	72	27	18	2	–	2
Worcester,	145,986	31	8	4	2	1	–	–	–
Fall River,	119,295	23	5	10	1	1	–	1	1
Lowell,	106,294	24	7	2	1	–	–	–	–
Cambridge,	104,839	23	6	8	3	1	1	–	–
New Bedford,	96,652	29	8	14	6	7	–	–	–
Lynn,	89,336	23	8	3	2	–	1	–	–
Springfield,	88,926	14	3	6	4	2	–	–	–
Lawrence,	85,892	29	11	12	5	3	–	–	–
Somerville,	77,236	18	5	7	2	4	–	–	–
Holyoke,	57,730	14	8	1	1	–	–	–	–
Brockton,	56,878	6	0	1	–	1	–	–	–
Malden,	44,404	10	1	2	1	–	–	–	–
Haverhill,	44,115	8	1	2	–	–	1	–	–
Salem,	43,697	7	1	3	2	1	–	–	–
Newton,	39,806	3	–	–	–	–	–	–	–
Fitchburg,	37,826	6	3	1	1	–	–	–	–
Taunton,	34,259	8	3	3	2	1	–	–	–
Everett,	33,484	5	1	1	–	–	1	–	–
Quincy,	32,642	8	5	1	1	–	–	–	–
Chelsea,	32,452	8	3	5	–	3	–	–	–
Pittsfield,	32,121	9	1	1	–	1	–	–	–
Waltham,	27,834	7	–	1	–	1	–	–	–
Brookline,	27,792	3	–	–	–	–	–	–	–
Chicopee,	25,401	8	4	2	–	1	–	–	–
Gloucester,	24,398	4	–	–	–	–	–	–	–
Medford,	23,150	6	2	2	–	2	–	–	–
North Adams,	22,019	3	2	2	–	–	–	–	–
Northampton,	19,431	7	1	–	–	–	–	–	–
Beverly,	18,650	3	1	–	–	–	–	–	–
Revere,	18,219	0	–	–	–	–	–	–	–
Leominster,	17,580	2	–	–	–	–	–	–	–
Attleborough,	16,215	2	2	1	–	–	–	–	–
Westfield,	16,044	1	1	–	–	–	–	–	–
Peabody,	15,721	–	–	–	–	–	–	–	–
Melrose,	15,715	3	–	2	1	–	–	–	–
Hyde Park,	15,507	2	–	–	–	–	–	–	–
Woburn,	15,308	1	0	–	–	–	–	–	–
Newburyport,	14,949	5	–	–	–	–	–	–	–
Gardner,	14,699	2	2	–	–	–	–	–	–
Marlborough,	14,579	1	0	–	–	–	–	–	–
Clinton,	13,075	3	–	–	–	–	–	–	–
Milford,	13,055	–	–	–	–	–	–	–	–
Adams,	13,026	2	2	1	1	–	–	–	–
Framingham,	12,948	3	0	1	–	1	–	–	–
Weymouth,	12,895	–	–	–	–	–	–	–	–
Watertown,	12,875	1	0	–	–	–	–	–	–
Southbridge,	12,592	1	1	1	1	–	–	–	–
Plymouth,	12,141	–	–	–	–	–	–	–	–
Webster,	11,509	0	–	–	–	–	–	–	–
Methuen,	11,448	2	–	–	–	–	–	–	–
Wakefield,	11,404	1	1	1	–	–	–	–	–
Arlington,	11,187	3	–	–	–	–	–	–	–
Greenfield,	10,427	1	1	1	–	–	–	–	–
Winthrop,	10,132	–	–	–	–	–	–	–	–
Recapitulation.									
Total of reporting towns,	2,542,346	591	159	174	64	49	6	1	3

WEEK ENDING JUNE 24, 1911.

CITIES AND TOWNS.	Population. Census for 1910.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —					
				Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	670,585	177	47	63	17	23	2	1	4
Worcester,	145,986	47	11	14	8	4	–	–	–
Fall River,	119,295	27	14	14	7	1	–	–	1
Lowell,	106,294	39	13	10	3	2	–	–	–
Cambridge,	104,839	22	6	6	1	2	3	–	–
New Bedford,	96,652	27	16	14	7	3	–	–	–
Lynn,	89,336	13	3	1	–	–	–	–	–
Springfield,	88,926	22	6	6	2	1	–	1	–
Lawrence,	85,892	21	7	4	4	–	–	–	–
Somerville,	77,236	19	4	–	–	–	–	–	–
Holyoke,	57,730	17	10	5	3	1	–	–	–
Brockton,	56,878	11	2	5	1	2	–	–	–
Malden,	44,404	9	2	5	1	3	–	–	–
Haverhill,	44,115	8	1	3	1	–	–	2	–
Salem,	43,697	10	4	2	1	–	–	–	1
Newton,	39,806	4	1	–	–	–	–	–	–
Fitchburg,	37,826	7	1	–	–	–	–	–	–
Taunton,	34,259	8	2	3	–	–	–	–	–
Everett,	33,484	8	2	–	–	–	–	–	–
Quincy,	32,642	7	3	1	–	–	1	–	–
Chelsea,	32,452	5	2	–	–	–	–	–	–
Pittsfield,	32,121	4	–	–	–	–	–	–	–
Waltham,	27,834	11	1	2	–	1	–	–	–
Brookline,	27,792	5	1	–	–	–	–	–	–
Chicopee,	25,401	8	3	1	1	–	–	–	–
Gloucester,	24,398	8	3	3	–	2	–	–	1
Medford,	23,150	8	2	3	–	2	–	–	–
North Adams,	22,019	4	1	1	–	1	–	–	–
Northampton,	19,431	4	0	–	–	–	–	–	–
Beverly,	18,650	4	1	2	–	1	–	–	–
Revere,	18,219	2	1	1	1	–	–	–	–
Leominster,	17,580	1	–	–	–	–	–	–	–
Attleborough,	16,215	2	1	1	–	1	–	–	–
Westfield,	16,044	6	1	3	–	2	–	–	–
Peabody,	15,721	–	–	–	–	–	–	–	–
Melrose,	15,715	5	0	–	–	–	–	–	–
Hyde Park,	15,507	7	0	1	–	1	–	–	–
Woburn,	15,308	1	0	–	–	–	–	–	–
Newburyport,	14,949	7	–	–	–	–	–	–	–
Gardner,	14,699	3	1	1	–	–	–	–	–
Marlborough,	14,579	6	2	–	–	–	–	–	–
Clinton,	13,075	3	1	1	–	1	–	–	–
Milford,	13,055	–	–	–	–	–	–	–	–
Adams,	13,026	1	0	–	–	–	–	–	–
Framingham,	12,948	3	0	–	–	–	–	–	–
Weymouth,	12,895	–	–	–	–	–	–	–	–
Watertown,	12,875	2	1	–	–	–	–	–	–
Southbridge,	12,592	3	2	2	1	–	–	–	–
Plymouth,	12,141	–	–	–	–	–	–	–	–
Webster,	11,509	0	–	–	–	–	–	–	–
Methuen,	11,448	2	1	–	–	–	–	–	–
Wakefield,	11,404	2	–	1	1	–	–	–	–
Arlington,	11,187	0	–	–	–	–	–	–	–
Greenfield,	10,427	3	1	2	–	1	–	–	–
Winthrop,	10,132	–	–	–	–	–	–	–	–
Recapitulation.									
Total of reporting towns,	2,542,346	623	181	181	60	55	6	4	7

WEEKLY RETURNS OF DEATHS FROM CERTAIN INFECTIOUS DISEASES.

Deaths from Infectious Diseases not specifically mentioned in above Tables during the Weeks of June 3, 10, 17, and 24, 1911.

Disease.	Place.	Week ending — June 3.	June 10.	June 17.	June 24.
Cerebro-spinal meningitis,	Boston,	1	1	1	–
	Greenfield,	–	–	1	–
	Lawrence,	–	1	–	–
	Lowell,	1	–	–	–
Scarlet fever,	Boston,	2	1	3	–
	Lowell,	–	–	–	1
	Malden,	–	–	1	–
	Worcester,	–	–	–	1
Whooping cough,	Adams,	–	1	–	–
	Attleborough,	–	–	1	–
	Boston,	4	1	2	2
	Cambridge,	1	1	1	–
	Chelsea,	–	–	2	–
	Chicopee,	–	1	–	–
	Everett,	1	–	–	–
Erysipelas,	Boston,	3	1	1	–
	Brockton,	1	–	–	–
	Cambridge,	–	–	1	–
	Lawrence,	1	–	–	–
	Somerville,	–	1	–	–
	Worcester,	1	–	–	–
Tuberculosis other than pulmonary.	Beverly,	–	–	–	1
	Boston,	5	4	7	2
	Cambridge,	–	1	–	–
	Chelsea,	–	1	–	–
	Fall River,	–	2	1	–
	Gardner,	–	1	–	–
	Haverhill,	–	1	–	–
	Holyoke,	–	1	–	1
	Lawrence,	–	1	–	–
	Leominster,	1	–	–	–
	Lowell,	1	2	–	1
	Malden,	–	–	–	1
	Medford,	–	–	–	1
	New Bedford,	1	–	–	–
	Somerville,	–	–	1	–
	Springfield,	1	–	–	1
	Taunton,	–	–	–	1
	Wakefield,	–	–	1	–
	Waltham,	1	–	–	1
	Westfield,	–	–	–	1
	Worcester,	2	1	1	1

DEATHS FROM INFECTIOUS DISEASES, ETC. — *Concluded.*

DISEASE.	Place.	WEEK ENDING — June 3.	June 10.	June 17.	June 24.
Influenza,	Boston,	–	1	–	–
	Fall River	6	–	–	–
Anterior poliomyelitis,	Cambridge,	–	1	–	–
Anthrax,	Lynn,	1	–	–	–
Meningitis other than cerebro-spinal.	Greenfield,	–	–	–	1

WEEKLY RETURNS OF CASES OF INFECTIOUS DISEASES.

CASES OF INFECTIOUS DISEASES REPORTED DURING THE WEEKS OF June 3, 10, 17 AND 24, 1911.

[Under the provisions of section 52 of chapter 75 of the Revised Laws.]

	WEEK ENDING — June 3.	June 10.	June 17.	June 24.	Total.
Diphtheria,	112	169	145	137	563
Measles,	648	573	514	328	2,063
Scarlet fever,	95	104	105	105	409
Typhoid fever,	18	18	26	37	99
Tuberculosis, pulmonary,	130	139	123	132	524
Tuberculosis other than pulmonary,	2	1	4	4	11
Cerebro-spinal meningitis,	4	3	3	1	11
Meningitis other than cerebro-spinal,	–	–	–	–	–
Whooping cough,	72	51	84	101	308
Varicella,	52	59	34	33	178
Erysipelas,[1]	1	–	–	–	1
Mumps,[1]	6	8	7	2	23
Ophthalmia neonatorum,	25	15	23	32	95
Anterior poliomyelitis,	2	2	4	–	8
Smallpox,	1	–	–	–	1
Malaria,	–	1	1	1	3
Tetanus,	1	–	3	–	4
Anthrax,	1	–	–	–	1
Malignant pustule,	1	–	–	1	2

[1] Erysipelas and mumps are not diseases notifiable under section 52 of chapter 75 of the Revised Laws. The figures concerning these diseases are, therefore, incomplete.

MONTHLY REPORT ON INSPECTION OF FOOD AND DRUGS.

The following summary presents the results of the examination of food and drugs made by the State Board of Health during the month of June, 1911:—

ARTICLES EXAMINED.	Number found to be of Good Quality.	Number adulterated or varying from the Legal Standard.	Total.	ARTICLES EXAMINED.	Number found to be of Good Quality.	Number adulterated or varying from the Legal Standard.	Total.
Butter,	2	2	4	Horse-radish,	1	–	1
Canned fish,	2	–	2	Jams and jellies,	2	–	2
Canned fruit,	1	–	1	Malt liquor,	2	–	2
Canned vegetables,	1	–	1	Maple sugar,	–	1	1
Cheese,	1	–	1	Maple syrup,	2	–	2
Cider,	1	–	1	Milk,	363	126	489
Cocoa,	2	–	2	Meat products: —			
Condensed milk,	2	–	2	Canned meat,	1	–	1
Confectionery,	1	–	1	Hamburg steak,	1	–	1
Cream,	14	–	14	Lambs' tongues,	1	–	1
Cream of tartar,	2	–	2	Sausages,	2	2	4
Drugs,	142	17	159	Olive oil,	10	1	11
Eggs,	19	19	38	Pickles,	3	–	3
Flavoring extracts: —				Salad dressing,	2	–	2
Lemon,	3	2	5	Spice,	1	–	1
Peppermint,	1	–	1	Syrups,	4	–	4
Vanilla,	7	1	8	Table sauce,	2	–	2
Fruit juice: —				Vinegar,	1	–	1
Orange,	1	–	1				
Grape,	2	–	2	Total,	602	171	773

The samples of drugs found to be adulterated were: alchohol, camphor liniment, peppermint, tincture of iodine, and proprietary medicines.

The cities and towns in which samples were collected were: Ayer, Beverly, Boston, Cambridge, Chelsea, Dalton, Everett, Fitchburg, Franklin, Gloucester, Holliston, Hull, Hyde Park, Lawrence, Leominster, Lexington, Lincoln, Lowell, Lynn, Malden, Natick, New Bedford, Newton, North Brookfield, Northampton, Palmer, Pittsfield, Plymouth, Revere, Rockland, Salem, South Framingham, Springfield, Townsend, Ware, Waltham, Westfield, Winchester, Woburn and Worcester.

PROSECUTIONS FOR VIOLATIONS OF THE LAW RELATING TO FOOD AND DRUGS.

Thirteen convictions were secured during the month of June, 1911, for selling adulterated food and drugs, as follows: —

No.	Name of Defendant.	Place.	Character of Article sold.
1	Thomas Caradontes,	Boston,	Maple sugar.
2	Patrick Doherty,	North Andover,	Milk (total solids, 9.60).[1]
3	Patrick Doherty,	North Andover,	Milk (total solids, 8.93).[1]
4	Gardener Dolloff,	Fitchburg,	Milk (total solids, 10.90).[1]
5	Julius L. Lowenstien,	Hinsdale,	Milk (total solids, 11.44).[1]
6	Samuel L. Perrott,	Waltham,	Milk (total solids, 10.00).[1]
7	Frank Sturgis,	Lanesborough,	Milk (total solids, 11.84).[2]
8	Comfort Sykes,	Lanesborough,	Milk (total solids, 9.16).[1,2]
9	Comfort Sykes,	Lanesborough,	Milk (total solids, 9.16).[1,2]
10	William H. Wakefield,	Spencer,	Milk (not marked).[2]
11	John Zika,	Natick,	Olive oil, 100 per cent. cotton seed oil.
12	Frank S. Cragin with Chas. Clark & Son,	Lawrence,	Spirit of peppermint.[3]
13	Joseph F. Lord,	Lawrence,	Spirit of peppermint.[3]

[1] Watered. [2] Skimmed. [3] Below standard.

Fines imposed, $450.

Number of Sample.	Character of Sample.	Name of Manufacturer, Wholesaler or Producer.	Results of Analyses.
14917	Pure extract of lemon,	Simpson Bros. Company,	No lemon oil present.
14926	Vino Sangre, Medicinal Wine.	S. S. Pierce Company, Boston, Mass.,	Contained 19.28 per cent. alcohol by volume.
14821	Camphor liniment,	A. W. Cunningham, Springfield, Mass.,	43.6 per cent. U. S. P. strength; low in camphor.
	Tincture iodine,	Bay State Drug Company, Palmer, Mass.,	85 per cent. U. S. P. strength; low in iodine.
8806 N	Spirit of peppermint,	Charles Clarke & Son, Lawrence, Mass.,	61 per cent. U. S. P. strength; low in peppermint oil.
8896 N	Spirit of peppermint,	Ropes Drug Company, Lynn, Mass.,	84.2 per cent. U. S. P. strength; low in peppermint oil.
14802	Spirit of peppermint,	Packard's Pharmacy, East Boston, Mass,	84.2 per cent. U. S. P. strength; low in peppermint oil.
8932 N	Spirit of peppermint,	Levasseur's Pharmacy, Worcester, Mass.,	78 per cent. U. S. P. strength; low in peppermint oil.
9010 N	Spirit of peppermint,	Walter L. Conwell, Pharmacist, Boston, Mass.,	29.5 per cent. U. S. P. strength; low in peppermint oil.
14707	Milk,	Morris Gissin, Springfield, Mass.,	Total solids, 9.50 per cent.; fat, 3.10 per cent.; contained added water.
q 7065	Milk,	William A. Cooper, Townsend Harbor, Mass.,	Total solids, 11.80 per cent.; fat, 4.20 per cent.; contained added water.
q 7071	Milk,	Gardner Dolloff, Fitchburg, Mass.,	Total solids, 11.90 per cent.; fat, 4.00 per cent.; contained added water.
q 7072			Total solids, 10.90 per cent.; fat, 3.50 per cent.; contained added water.
q 7073			Total solids, 11.78 per cent.; fat, 4.00 per cent.; contained added water.
14858	Milk,	Patrick Doherty, North Andover, Mass.,	Total solids, 9.60 per cent.; fat, 2.80 per cent.; contained added water.
14859			Total solids, 10.00 per cent.; fat, 2.90 per cent.; contained added water.
14903			Total solids, 8.93 per cent.; fat, 2.40 per cent.; contained added water.
14904			Total solids, 9.58 per cent.; fat, 2.65 per cent.; contained added water.
14905			Total solids, 10.46 per cent.; fat, 3.10 per cent.; contained added water.
14906			Total solids, 9.50 per cent.; fat, 2.85 per cent.; contained added water.

LIST OF ADULTERATED OR IMPROPERLY LABELED FOODS, ETC. — *Concluded.*

Number of Sample.	Character of Sample.	Name of Manufacturer, Wholesaler or Producer.	Results of Analyses.
8047 R	Milk,	Robert A. Rice, Pittsfield, Mass.,	Total solids, 11.26 per cent.; fat, 3.50 per cent; contained added water.
8067 R	Milk,	Knott V. Martin, Marblehead, Mass.,	Total solids, 10.82 per cent.; fat, 3.30 per cent.; contained added water.
8071 R		Stephen C. Martin,	Total solids, 10.22 per cent.; fat, 3 05 per cent.; contained added water.
9002 N	Milk,	Thomas H. Shaw, Holliston, Mass.,	Total solids, 9 84 per cent.; fat, 2.60 per cent.; contained added water.
9004 N			Total solids, 10.06 per cent.; fat, 2.60 per cent.; contained added water.
9006 N			Total solids, 10.86 per cent.; fat, 3.00 per cent.; contained added water.
9008 N			Total solids, 10.20 per cent.; fat, 2.70 per cent.; contained added water.
8053 R	Milk,	Henry Kirchner, Dalton, Mass.,	Total solids, 11.32 per cent.; fat, 2.70 per cent.; proteids, 3.16 per cent.; skimmed milk.
8055 R			Total solids, 11.46 per cent.; fat, 2.40 per cent.; proteids, 3.41 per cent.; skimmed milk.
8057 R			Total solids, 11.34 per cent.; fat, 2.30 per cent.; proteids, 3.58 per cent.; skimmed milk.

INSPECTION OF DAIRIES.

During the month of June, 1911, 166 dairies supplying milk for public sale in Massachusetts were examined, 1 of which is situated in Vermont. The Massachusetts dairies yielded the following data:—

Place.	Number examined.	Number found to present no Objectionable Features.	Per Cent.	Number concerning which Letters were sent.	Per Cent.
Barnstable,	7	4	57.14	3	42.86
Chatham,	9	8	88.89	1	11.11
Colrain,	41	29	70.73	12	29.27
Eastham,	5	4	80.00	1	20.00
Falmouth,	15	7	46.67	8	53.33
Harwich,	8	6	75.00	2	25.00
Nantucket,	3	–	–	3	100.00
Second inspection,	34	30	88.24	4	11.76
Orleans,	1	1	100.00	–	–
Second inspection,	1	1	100.00	–	–
Provincetown,	1	1	100.00	–	–
Second inspection,	8	8	100.00	–	–
Sandwich,	–	–	–	–	–
Second inspection,	15	15	100.00	–	–
Truro,	–	–	–	–	–
Second inspection,	11	11	100.00	–	–
Wellfleet,	5	3	60.00	2	40.00
Yarmouth,	1	–	–	1	100.00

Total number of dairies examined (including that in Vermont),	166
Number found to be free from objectionable conditions,	129
Number to which letters were sent,	37
Total number of conditions to which attention was called,	97
Percentage of dairies which passed inspection,	77.71

In addition to the above, 17 dairies were visited at which the sale of milk had been discontinued.

The towns of Bourne, Brewster, Dennis and Mashpee were also visited and it was found that the milk produced was not marketed, being only a sufficient quantity for home use.

The names of the owners of the dairies found to be worthy of commendation follow:—

Barnstable.

Class A.

Hon. Robert W. Bacon.

Class B.

Jerauld, E. C. Linnell, Frank Marchant, Chas. B.

Chatham.

Class B.

Biggs, Mrs. Jennie Eldridge, George C. Hawes, Samuel
Doane, Fletcher Hale, Irving Ryder, Albert G.
Doane, Leonard Hammond, Stillman

COLRAIN.

Class A.

Temple, S. E.

Class B.

Avery, Clark
Avery, Frank
Barnes, Walter E.
Brigham, F. L.
Brown, O. M.
Copeland, E. F.
Cromack, S.
Donelson, Charles
Dunnell, Frank
Dwight, Edward
Fish, A. L.
Galvin, J. A.
Herzig, Rudolph
Howard, J. H.
LaChapelle, J. M.
LaMore, John E.
Lively, Joseph
Looman, James
Miller, H. B.
Miller, Robert
Peltier, Ephraim
Smith, Charles
Smith, William W.
Stowe, B. A.
Thompson, Fred
Thompson, G. A.
Thompson, Levi H.
Thompson, Milo A.

EASTHAM.

Class B.

Doane, Abaelino C.
Fulcher, J. G.
Knowles, Seth D.
Knowles, William F.

FALMOUTH.

Class B.

Bourne, William
Donaldson, John F.
Gifford, A. J.
Hatch, Silas
Murphy, Timothy
Nye, Charles J.
Perry and Ferrire

HARWICH.

Class B.

Carlson, Charles
Eldredge, James
Ellis, E.
Kelley, John
McGran, Richard W.
Robbins, Elmer E.

NANTUCKET.

Class A.

Cabot, Channing* †
Crosby, Miss Mary E.* †
Hussey, Oliver C.*

Class B.

Adams, B. S.*
Appleton, William D.*
Bartlett, John H.*
Chadwick, Albert S.*
Chadwick, Frank P.*
Coffin, Albert R.*
Coffin, Levi S.*
Coffin, R. H.*
Dunham, Harry*
Folger, Sidney B.*
Gardner, John C.* †
Gardner, Wallace* †
Gordon, Harry* †
Grouard, Dr. J. S.*
Hamblin, Thomas*
Lewis, S. L., Jr.* †
Marks, Mrs. Charles*
Mooney, Lawrence*
Morris, Charles C.* †
Mowry, E. C.*
Murray, Philip*
Pitman, Samuel*
Roberts, David* †
Starbuck, Alfred*
Stevens, W. B.*
Swain, Mrs. Sarah*
Thurston, Charles W.* †

ORLEANS.

Class B.

Atwood, David*
Eldridge, William

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* Second inspection. † Reported favorably on first inspection.

Provincetown.

Class B.

Dyer, Amasa
Francis, Joseph*
Holmes, Joseph*
King, John I.* †
Merrill, Manuel T.*
Nickerson, L. F.*
Roderick, John*
Snow, Tilden F.*
Steele, Joseph & Sons* †

Sandwich.

Class B.

Armstrong, R. F.* †
Fish, George* †
Forster, William A.*
Holway, H. P.*
Holway, J. E.*
King, Samuel*
Lovell, James*
McLaughlin, George*
Murphy, M.*
Newcombe, William*
Parker, George* †
Smith, William* †
Tinkham, Frank*
Tobey, Frank* †
Tulas, Herman* †

Truro.

Class B.

Cabrall, Joseph* †
Francis, A. A.* †
Francis, J. S.* †
Hutchins, H. S.*
Peters, Antone*
Rich, M. A.*
Rogers, Antone* †
Small, E. L.* †
Small, Frank*
Small, Warren W.* †
Sparrow, J. H.*

Wellfleet.

Class B.

Freeman, John
Gills, James
Higgins, John L.

Vermont.

Place.	Number examined.	Number found to present no Objectionable Features.	Per Cent.	Number concerning which Letters were sent.	Per Cent.
Halifax, ...	1	1	100.00	–	–

Halifax.

Class B.

Higley, W. E.

* Second inspection. † Reported favorably on first inspection.

AN INVESTIGATION AS TO THE OCCURRENCE IN MASSACHUSETTS OF PARALYSIS IN THE LOWER ANIMALS AND FOWLS.[1]

ARTHUR W. MAY, D.V.M., BOSTON, MASS.

The investigation of animal paralysis was made from Oct. 15 to Dec. 31, 1910, and consisted mainly of interviews with veterinarians, poultry raisers and dog breeders. The area covered during the investigation included the whole of Berkshire, Middlesex and Essex counties and parts of Franklin, Worcester, Norfolk, Suffolk and Plymouth counties.

The cases detailed in this report are all of the cases of paralysis reported except those associated with azoturia, parturient paresis and the paralysis of dogs subsequent to distemper.

No. 1.

Needham. — Dr. S. O. Fowle. Horse, thirty-two years old. Paraplegia developed in the stable. Destroyed within forty-eight hours.

No. 2.

Winchester. — Dr. Wm. Buckley. Several cases of paralysis in old livery horses. Paraplegia developed while the horses were at work and also in the stable. Destroyed.

No. 3.

North Adams. — Dr. A. A. McDonell. Numerous cases of paralysis (paraplegia) in horses from 1892–1902. Prevalent in winter. No cases in the last few years. Four cases seen, several years ago, at a farm on Florida Mountain. These cases all occurred in colts fed on wild grasses, and no cases have developed since the farm was ploughed and seeded down. Symptoms, as remembered, were swaying of hind quarters, staggering gait, capricious appetite. Bowels normal. No atrophy noticed after recovery; 70 per cent. recovered. "Has been prevalent in Vermont and has been investigated." The investigation in Vermont resulted in the opinion that the paralysis was caused by feeding foxtail, one of the wild grasses.

No. 4.

North Adams. — Dr. R. T. Williams. In August, 1910, 3 pigs four to five months old were seen at a farm on the road to Savoy, over Burlingame Hill. Paraplegia; sudden onset. Recovered.

[1] An investigation made under the direction of the Massachusetts State Board of Health to determine, in a general way, the frequency of paralysis in the lower animals. Whether or not such animal paralyses have any relation to infantile paralysis as seen in human beings has not yet been determined, but will be the subject of extended investigation during the coming year.

No. 5.

Gardner. — Dr. A. S. Cleaves. Red roan gelding, eleven years old. The case first visited by Dr. Cleaves the last of April or first of May, 1909. Horse had been working on farm for four or five days hauling manure from barn to field. Work was not excessive. Horse became suddenly paralyzed, fell on the road, and was removed to stable on a stone boat. The symptoms were characteristic of azoturia, but the urine was normal in color and consistency. The paralysis was not complete as the horse was able to get up, with some difficulty, during the following few days. The case was not seen by veterinarian until three weeks later. The paralysis and loss of co-ordination were very pronounced. The patient was in the field, and when forced to trot swayed and fell down, finally getting up on fore feet and dragging hind legs. The case was visited with Dr. Cleaves Oct. 27, 1910. The horse was trotted, and showed a peculiar rolling motion in the hind quarters, inability to take the normal length of stride, and loss of co-ordination. The horse was in poor condition, but showed no distinct atrophy of any one set of muscles.

No. 6.

Westminster. — Poultry Farm A. Thirty or more cases of chicken paralysis have occurred on this farm during the past season. The chickens were turned into the orchard in June, a week after the spraying with arsenate of lead had been finished. The orchard contained plenty of grass and fallen apples, on which the chickens fed. The disease appeared in September and still existed in October, although the fowls had been removed to their winter houses. The fowls affected were all five months old, no cases occurring among the older stock. The first symptom was slight drooping of one wing, and then in forty-eight hours the wing and leg on the same side would become completely paralyzed. The appetite remained good during the disease. The fowls were destroyed as soon as the paralysis became complete. No cases in 1909.

No. 7.

Westminster. — Poultry Farm B. This farm adjoins the farm noted in the previous report (No. 6). During the past season there have been 10 cases of chicken paralysis among the five-months-old fowls, and at the present time (Oct. 27, 1910) there are 4 new cases. The chickens presented the same symptoms, and were kept in the orchard, as in the previous case. The only difference in the conditions of the two farms was that in the latter the orchard was not sprayed. The drainage from the orchard on farm A runs directly away from premises B.

No. 8.

Westborough. — Dr. Chas. H. Reed. A cow, owned by W. E. G., became suddenly paralyzed (paraplegia) in pasture Aug. 21, 1910. Driven with difficulty to barnyard. Due to calve Jan. 13, 1911. Symptoms August 21:

paraplegia, volar flexion, head extended and turned slightly on its axis. Appetite fair; bowels normal. October 31, cow down; motor and sensory paralysis complete in hind quarters; head extended and turned, right horn being lower than the left.

No. 9.

Westwood. — Dr. J. J. Mulvehill. Paraplegia in a cat. Case was visited but once and final result not known.

No. 10.

Dedham. — Dr. Edward Knobel. July, 1910. A French bulldog; sudden attack paraplegia, gradually working forward, followed by death.

No. 11.

Pittsfield. — Dr. E. L. Hannon. *A.* Three mongrel puppies, three months old, affected with paraplegia Aug. 29, 1910. Paralysis increased; dogs died in a few days. Owned in Lebanon, N. Y.

B. January, 1910. Gelding, twelve years old. Patient was found down in stall in the morning, unable to rise; paraplegia. Temperature 103.2°; urine high colored. Horse destroyed.

No. 12.

Pittsfield. — Dr. J. A. Brackin. *A.* Eight or ten years ago numerous cases of paralysis (principally paraplegia) in colts. Five or six colts have been seen affected on one farm at one time. "Mr. C. A. of Richmond had a colt paralyzed in July, but it is now better and being driven, although stiff gaited. Mr. A. has had 2 cases of anterior poliomyelitis in his children in the last three years."

B. A large number of cases of paraplegia in colts seen in New York State a number of years ago.

No. 13.

Cohasset. — Dr. D. W. Gilbert. Cat owned by W. J. C., North Cohasset. Paralyzed (paraplegia) November 7. Recovering slowly.

No. 14.

Newtonville. — Dr. W. T. White. French bull dog; paraplegia. Recovered in three days.

No. 15.

Brockton. — Dr. W. H. Brownell. Gray mare; became paralyzed in hind quarters on the road, August 16. Case was typical of azoturia, but there was no apparent change in the urine. The horse improved gradually, but showed considerable paralysis November 30.

No. 16.

Brockton. — Dr. B. D. Curtis. Severe outbreaks of pig paralysis during the past few years.

No. 17.

Brockton. — Dr. J. K. Mason, Campello. *A.* March, 1910. Seven-months-old Guernsey bull; sudden attack complete paraplegia. Destroyed six weeks later, and at that time atrophy of gluteal muscles was noted.

B. Holstein heifer, six months old. Animal eating, suddenly completely paralyzed in hind quarters. Destroyed a week later.

Dr. Mason also reports cases of this character as not uncommon in the past few years.

No. 18.

Amesbury. — Dr. A. A. Taylor. Twenty-year-old gelding became paralyzed in stable. This horse had been working every day. Destroyed. The owner of horse was G. P., Hunt's Corner, Salisbury.

No. 19.

Amesbury. — Mr. Morrison. Mr. Morrison is a dog breeder, and also the dog officer for the town. One case of paralysis (paraplegia) in a dog, with no apparent cause.

No. 20.

Amesbury. — E. S. Worthen. Dog twelve years old became suddenly paralyzed. This case seen December 2. The dog was completely paralyzed posterior to the lumbar regions. Appetite and general health excellent. The attack occurred about November 8, and when seen showed no atrophy.

No. 21.

Boston. — Dr. J. W. Tobin. November, 1910. Dog, nine years old: paraplegia. The dog became paralyzed at Braintree and was sent to Dr. Tobin's hospital. The dog was taken home by the owner, so that the case was not seen again.

No. 22.

Boston. — Dr. S. F. Wadsworth, Cummington Street. *A.* Three cases of paralysis in dogs during the last week in September and the first week in October, 1910. All 3 cases had the same symptoms: slight paralysis of hind legs, increasing steadily until paralysis of all four legs, coma and death. The head was twisted to the right. The dogs affected were of different breeds and ages. Two lived twelve days, and the third, a puppy, lived only three days.

B. A cocker spaniel on October 11 showed a slight paralysis of the hind legs. The paralysis increased rapidly, and in a few hours there was complete paraplegia. Treatment consisted of point firing in the lumbar region, with cautery. December 5 dog able to walk and improving steadily. No atrophy.

No. 23.

Gloucester. — Dr. E. W. Babson. A previous report has been made by Dr. Babson on a case seen during the winter of 1909-10.

Case of paralysis (paraplegia) occurring in a horse while being driven. The horse removed to the stable and put in slings. Improved slightly for a few days following the administration of a purgative. The paralysis later became more pronounced and the patient was destroyed.

No. 24.

Beverly. — Dr. H. D. Lambert. Chicken paralysis among his own game fowls. There were 5 or 6 cases early in September, all dying.

No. 25.

Beverly. — Dr. W. B. Wentzell. Called to attend 15 cases of paraplegia in cows during the past year. The cows affected have been brought to Beverly on the cars from without the State. The different shipping points are not known. The disease occurred during the summer months in 70 per cent. and in the early fall in 30 per cent. The paralysis appeared in from one to four days after unloading. The greater majority of the cases died.

No. 26.

Salem. — Dr. J. H. Seale. L. & S. stable, W Street. *A.* Horse sick with gastro-enteric disturbance for two days. The third day paraplegia suddenly developed, and the horse died three days later. Case occurred during summer of 1910.

B. Horse affected with colic and diarrhœa while at work; returned to stable, and paraplegia developed in a few hours. The paralysis progressed until all four limbs were affected. The paralysis was more marked in the forward legs. Died quietly five days later. Cases A and B occurred during the summer.

C. L. & S. stable, F. Street. Horse purchased about November 1, fresh from the west. Developed paralysis of the hind quarters about December 1. Symptoms, swaying, staggering gait; bowels and appetite normal. Temperature variable, ranging from 100.4° to 102.4° F.

D. At the same time with cases A and B there were 8 or 10 cases of gastro-enteric disturbance among the horses in the same stable. No change in water supply or new hay or grain.

E. Several cases of paraplegia, in cats and dogs, accompanied by vomiting. The later cases terminated fatally.

No. 27.

Lynn. — Dr. F. J. Babbitt. *A.* Cow owned by F. J. G., Lynn. The cow was purchased at Brighton about Sept. 1, 1910, and two weeks later developed paraplegia. The cow was being driven from the pasture to the stable, and fell down while crossing the road, regained her feet and a short distance further fell again. Symptoms: complete paralysis of hind quarters, anorexia. The head seemed peculiarly sensitive, as the lightest touch would produce muscular spasms, twitching and finally coma. Later, consciousness regained. Died five days after onset.

B. Chicken paralysis very prevalent on the farm of F. J. G. during 1908.

C. Cow owned by R. G. Partial hemiplegia; head turned to one side (right) and cow circled to the right when forced to walk. The first symptom was the twisting of the neck, and occurred in the stable. Destroyed after three days.

D. Numerous cases in cats during the past few years. The paralysis gradually increased in severity and involved the rest of the body, resulting in death.

No. 28.

Reading. — Dr. C. S. Playdon. Six cases of paraplegia in cocker spaniels in the month of November, 1910. The dogs varied in age from four to seven years. The only difference in the cases was that some were very sensitive to the touch. The greater number made a complete recovery.

No. 29.

Newburyport. — Dr. F. C. Blakely. Cattle owned by F. S. M., Newburyport. In a herd of cattle 5 cases of eczema appeared among the young during the month of May, 1910. The eczema was followed by paraplegia in 3 cases.

A. Heifer. Eczema of abdomen, May 3, followed rapidly by eczema of neck and legs. Symptoms of paraplegia, with diarrhœa, May 25; May 26 paraplegia complete, animal down; May 27 animal able to get up, and improvement continued slowly. Case not seen for several months, but on December 6 no paralysis or atrophy.

B. Bull, four years. Eczema, May 24. Paraplegia developed May 26; bowels constipated May 26, followed by dysentery (bloody); paraplegia complete May 27. Paralysis continued, and animal died June 5.

C. Heifer. Hæmatoma in the skin on the body, one on neck and shoulder and also eczema, May 24. No paralysis or diarrhœa. Recovered.

D. Hæmatoma in bronchi, demonstrated on autopsy. Paraplegia. Paralysis increased in area and animal died.

E. Heifer. Bloody diarrhœa. Animal destroyed.

No. 30.

Boston. — Dr. A. W. May. Spaniel, Mrs. H. B. C., Jamaica Plain. This dog had a slight paraplegia for a short time, and during August, 1905, suddenly developed complete paralysis of the hind legs, bowels and bladder. The case improved slowly. The paralysis and atrophy are evident at the present time.

In a livery stable owned by Mr. C., 7 cases of paralysis occurred Sept. 30 and Oct. 1, 1910.

A. Patient was visited in the evening, September 30. The horse was in a comatose condition, respiration slow and subnormal temperature. The horse did not eat and was unable to drink on the 29th. Paralysis of the hind quarters during the morning of the 30th. The paralysis increased rapidly, until the fore legs were affected; the patient fell down, became unconscious and died in the evening.

B. Patient visited during the morning of October 1, and showed complete paralysis of the muscles of deglutition; blind, with extreme dilatation of the pupils; constipation, retention of urine; temperature 102.5°; and slight swaying of the hind quarters. Paralysis increased until animal became comatose, in the afternoon, and died late in the evening of the same day.

There were 7 cases of paralysis, including the 2 described, all having the same train of symptoms. The cases terminated fatally, with one exception, within sixty hours of the first symptom of paralysis.

In 1 case the symptoms were less severe, and the patient was supported in slings, and lived until October 20.

In making an examination of the other horses in the stable, about 15 in number, it was found that 5 were suffering from a gastro-enteric disturbance. The symptoms were colic, diarrhœa, tympanitis and anorexia. The latter cases made complete recoveries in two or three days.

The general condition of the affected horses varied from excellent to very poor. The ages were from six to twenty years. Inquiries were made as to a possible source of lead causing poisoning, but with negative results. It was found that, for several days previous to September 30 raw potatoes had been fed to the horses. The symptoms of paralysis did not appear until the potatoes had been wet, as they lay in a pile, and mold had developed. The potatoes were not fed after October 1 and no new cases appeared.

Acts of 1911, Chapter 576.

An Act to provide for the maintenance of tuberculosis dispensaries in cities and towns of ten thousand inhabitants or over.

Every city, and every town containing a population of ten thousand or more, as determined by the latest United States census, shall establish and maintain within its limits a dispensary for the discovery, treatment, and supervision of needy persons resident within its limits and afflicted with tuberculosis, unless there already exists in such city or town a dispensary which is satisfactory to the state board of health. The said dispensaries shall be subject to the regulations of the boards of health of the cities or towns in which they are respectively situated. A city or town subject to the provisions of this act which, upon the request of the state board of health, refuses or neglects to comply with the provisions hereof, shall forfeit not more than five hundred dollars for every such refusal or neglect. [*Approved June 22, 1911.*

Acts of 1911, Chapter 597.

An Act to encourage and promote the building and use of tuberculosis hospitals in cities and towns.

Section 1. Every city or town which establishes and maintains a tuberculosis hospital shall be entitled to receive from the commonwealth a subsidy of five dollars per week for each patient who is unable to pay for his support, or whose kindred bound by law to maintain him are unable to pay for the same, but the city or town shall not become entitled to this subsidy unless, upon examination authorized by the trustees of hospitals for consumptives, the sputum of such patients be found to contain bacilli of tuberculosis, and unless the hospital be subject to the inspection of, and be approved by, said trustees.

Section 2. Said trustees of hospitals for consumptives shall certify in the case of each hospital approved by them as provided in the preceding section the number of patients for whom the city or town is entitled to the subsidy, and upon such certification the subsidy shall be paid from the treasury of the commonwealth in the same manner in which other claims against the commonwealth are paid.

Section 3. This act shall take effect upon its passage.

(*The foregoing was laid before the Governor on the twenty-first day of June, 1911, and after five days it had "the force of a law", as prescribed by the Constitution, as it was not returned by him with his objections thereto within that time.*)

Acts of 1911, Chapter 613.

An Act relative to the maintenance of isolation hospitals by cities and towns.

Section 1. Chapter seventy-five of the Revised Laws is hereby amended by striking out section thirty-five and inserting in place thereof the following: — *Section 35.* Each city and town shall establish and constantly main-

tain within its limits one or more isolation hospitals for the reception of persons having diseases dangerous to the public health as defined by the state board of health, including a tuberculosis hospital or tuberculosis wards. Plans for the construction of such hospitals shall be approved by the state board of health, and said hospitals shall be inspected by the state board of health or by its accredited agent, at least twice in every year. But if, in the opinion of the state board of health, two or more adjoining towns or a city and contiguous towns can advantageously establish and maintain such hospitals in common, the authorities of said towns or of such cities and contiguous towns may enter into such agreements as may be necessary for the establishment and maintenance of the same. Any city or town which upon the request of the state board of health refuses or neglects to comply with the provisions of this section shall forfeit not less than five hundred dollars for every such refusal or neglect.

Section 2. This act shall take effect upon its passage. [*Approved June 30, 1911.*

Acts of 1911, Chapter 596.

An Act to provide for the construction of sanitary stations in cities and in certain towns.

Section 1. In every city and in all towns having a population of over ten thousand inhabitants, there shall be provided in some convenient place or places, at or near the business centre of the city or town, one or more sanitary stations with separate water closets for the use of both sexes, which sanitary stations shall be established and maintained by the city or town in which they are located. The number and the location of said sanitary stations shall be determined for every city, and for every such town, by the local board of health: *provided, however,* that if in the opinion of the board of health of any city or town such sanitary stations are not necessary in that city or town such city or town shall not be required to provide the same.

Section 2. This act shall take effect on the first day of September, nineteen hundred and eleven.

(*The foregoing was laid before the Governor on the twentieth day of June, 1911, and after five days it had "the force of a law", as prescribed by the Constitution, as it was not returned by him with his objections thereto within that time*).

Acts of 1911, Chapter 600.

An Act to define the standard for vinegar and to regulate its sale.

Section 1. Section sixty-six of chapter fifty-seven of the Revised Laws is hereby amended by striking out the said section and inserting in place thereof the following section: — *Section 66.* Whoever, himself or by his servant or agent or as the servant or agent of another person, sells, exchanges or delivers, or has in his custody or posession with intent to sell, exchange or deliver, or exposes or offers for sale or exchange adulterated vinegar, or whoever labels, brands, or sells as cider vinegar or as apple

vinegar, any vinegar not the exclusive product of the alcoholic and subsequent acetous fermentation of the pure juice of fresh apples, shall be punished by a fine of not more than one hundred dollars.

Section 2. Section sixty-seven of chapter fifty-seven of the Revised Laws is hereby amended by striking out the same and inserting in place thereof the following: — *Section 67.* Vinegar shall contain no added or artificial coloring matter, and shall contain not less than four and one half per cent, by weight, of absolute acetic acid. Cider vinegar shall in addition contain not less than one and eight tenths per cent, by weight, of cider vinegar solids upon full evaporation at the temperature of boiling water. If vinegar contains any added or artificial coloring matter, or less than the required amount of acidity, or if cider vinegar contains less than the required amount of acidity or of cider vinegar solids, it shall be deemed to be adulterated.

Section 3. Each cask, barrel or other container used by a manufacturer or producer of or wholesale dealer in vinegar, to contain vinegar sold or offered for sale, shall be plainly marked with the name and place of business of the said manufacturer, producer or wholesale dealer, the kind of vinegar contained therein, and the substance or substances from which it was made. Every compound or mixture or blend of vinegar shall be marked with the word "compound" or "mixture", with a statement of its constituents and the percentage of each constituent. The principal label, including the word "compound" or "mixture", if used on vinegar in wooden packages, shall be in Roman letters not less than one inch high, properly spaced and in straight parallel lines with no more than two inches of space between each line. The marking of vinegar in other containers than wooden packages shall be governed by the provisions of section eighteen and nineteen of chapter seventy-five of the Revised Laws. Whoever, himself, or by his servant, or agent, violates any provision of this section shall be punished by a fine of not more than one hundred dollars.

Section 4. All officers or persons whose duty it is to enforce the laws relating to food and milk, shall enforce the laws relating to vinegar, and all statutes relating to food shall apply to vinegar so far as they may be applicable.

Section 5. Section sixty-nine of chapter fifty-seven of the Revised Laws is hereby repealed.

Section 6. This act shall take effect on the first day of July in the year nineteen hundred and eleven. [*Approved June 29, 1911.*

Acts of 1911, Chapter 603.

An Act relative to obtaining information concerning the proper lighting of factories and workshops and investigating eye injuries.

Section 1. The state inspectors of health, or such other officers as the state board of health may from time to time appoint, shall, when obtaining information concerning the proper lighting of factories, workshops and

other industrial establishments, make such investigation concerning the eye and vision in their relation to diseases of occupation, including injuries to the eyes of the employees, and to the pathological effects which are produced or promoted by the circumstances under which the various occupations are carried on, as, in the opinion of said board is practicable, and the board shall from time to time issue such printed matter containing suggestions to employers and employees for the protection of the eyes of the employees as it may deem advisable.

SECTION 2. If it appears to an inspector of health, or other officer appointed by said board, that in any factory, workshop or other industrial establishment, from the nature of the work or of the machinery used in connection therewith, or of other circumstances, there is danger of injury to the eyes of employees engaged in such work, and that the danger of injury may be decreased or prevented by any mechanical device or other practicable means, he shall, if said board so directs, order in writing that such device or other means shall be provided therein; and it shall be the duty of the proprietors and managers of the factory, workshop or other industrial establishment to comply with the order.

SECTION 3. Any person, firm or corporation violating any provision of this act shall be subject to a fine of not less than five nor more than two hundred dollars for every week during which such violation continues: *provided, however*, that a criminal prosecution for any violation hereof shall not be begun unless such person, firm or corporation shall, for a period of four weeks after the receipt of an order in writing from a state inspector of health or other officer, as provided in the preceding section, neglect to comply therewith.

SECTION 4. There shall annually be appropriated from the treasury of the commonwealth a sum not exceeding one thousand dollars, which sum shall be added to the sum provided for by section seven of chapter five hundred and thirty-seven of the acts of the year nineteen hundred and seven. [*Approved June 30, 1911.*

ACTS OF 1911, CHAPTER 610.

AN ACT RELATIVE TO THE LABELING OF EVAPORATED, CONCENTRATED OR CONDENSED MILK.

SECTION 1. Every container of evaporated, concentrated or condensed milk sold or offered for sale, or had in possession or custody with intent to sell by any person, firm or corporation, within this commonwealth, shall have plainly printed thereon in the English language, or attached thereto on some firmly affixed tag or label, a formula for extending the said evaporated, concentrated or condensed milk with water. The said formula shall be such that the resulting milk product shall not be below the Massachusetts standard of milk solids or fat for whole milk.

SECTION 2. Whoever, himself or by his servant or agent, or as the servant or agent of any person, firm or corporation, sells, exchanges or delivers, or has in his custody or possession with intent to sell, exchange or deliver any container of evaporated, concentrated or condensed milk, within this common-

wealth, not marked or labeled in compliance with the provisions of this act shall, for the first offence, be punished by a fine of not more than one hundred dollars, for a second offence by a fine of not less than one hundred nor more than two hundred dollars, and for a subsequent offence by a fine of five hundred dollars, or by imprisonment for not less than three nor more than six months.

SECTION 3. This act shall take effect on the first day of January in the year nineteen hundred and twelve. [*Approved June 30, 1911.*

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OF

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Approved by
The State Board of Publication.

WEEKLY RETURNS OF DEATHS FROM CITIES AND TOWNS OF MORE THAN 10,000 POPULATION.

WEEK ENDING JULY 1, 1911.

CITIES AND TOWNS.	Population. Census for 1910.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM—					
				Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diphtheria.	Typhoid Fever	Measles.
Boston,	670,585	171	45	47	10	19	1	–	4
Worcester,	145,986	48	11	11	2	3	1	–	–
Fall River,	119,295	38	21	21	3	2	–	–	–
Lowell,	106,294	29	13	9	2	3	–	–	–
Cambridge,	104,839	25	6	9	1	2	2	–	–
New Bedford,	96,652	46	20	15	7	2	1	–	–
Lynn,	89,336	18	6	5	1	3	1	–	–
Springfield,	88,926	22	6	2	–	1	–	–	–
Lawrence,	85,892	27	9	12	1	4	–	1	–
Somerville,	77,236	10	2	6	4	–	–	–	–
Holyoke,	57,730	10	6	–	–	–	–	–	–
Brockton,	56,878	9	2	–	–	–	–	–	–
Malden,	44,404	6	1	1	1	–	–	–	–
Haverhill,	44,115	5	1	1	–	–	–	–	–
Salem,	43,697	15	4	1	–	–	1	–	–
Newton,	39,806	8	–	1	1	–	–	–	–
Fitchburg,	37,826	15	4	4	–	3	1	–	–
Taunton,	34,259	10	2	2	1	1	–	–	–
Everett,	33,484	5	–	3	–	3	–	–	–
Quincy,	32,642	10	3	1	–	–	–	–	–
Chelsea,	32,452	10	1	3	–	3	–	–	–
Pittsfield,	32,121	6	1	–	–	–	–	–	–
Waltham,	27,834	4	1	–	–	–	–	–	–
Brookline,	27,792	7	–	–	–	–	–	–	–
Chicopee,	25,401	6	2	–	–	–	–	–	–
Gloucester,	24,398	5	1	2	–	–	–	–	1
Medford,	23,150	4	–	–	–	–	–	–	–
North Adams,	22,019	6	2	1	1	–	–	–	–
Northampton,	19,431	5	0	1	1	–	–	–	–
Beverly,	18,650	4	1	1	–	–	–	–	–
Revere,	18,219	4	1	–	–	–	–	–	–
Leominster,	17,580	3	–	–	–	–	–	–	–
Attleborough,	16,215	4	0	–	–	–	–	–	–
Westfield,	16,044	6	1	5	1	4	–	–	–
Peabody,	15,721	–	–	–	–	–	–	–	–
Melrose,	15,715	1	1	–	–	–	–	–	–
Hyde Park,	15,507	3	0	2	–	–	–	–	–
Woburn,	15,308	4	1	–	–	–	–	–	–
Newburyport,	14,949	5	–	1	–	1	–	–	–
Gardner,	14,699	4	1	–	–	–	–	–	–
Marlborough,	14,579	4	0	–	–	–	–	–	–
Clinton,	13,075	2	0	1	–	–	1	–	–
Milford,	13,055	4	1	–	–	–	–	–	–
Adams,	13,026	1	0	–	–	–	–	–	–
Framingham,	12,948	6	2	1	1	–	–	–	–
Weymouth,	12,895	–	–	–	–	–	–	–	–
Watertown,	12,875	4	1	2	2	–	–	–	–
Southbridge,	12,592	4	1	–	–	–	–	–	–
Plymouth,	12,141	–	–	–	–	–	–	–	–
Webster,	11,509	3	1	2	–	1	–	–	–
Methuen,	11,448	6	1	–	–	–	–	–	–
Wakefield,	11,404	1	–	1	–	–	–	–	–
Arlington,	11,187	4	–	1	–	1	–	–	–
Greenfield,	10,427	4	2	–	–	–	–	–	–
Winthrop,	10,132	3	2	1	1	–	–	–	–
Recapitulation.									
Total of reporting towns,	2,565,623	664	187	176	41	56	9	1	5

WEEK ENDING JULY 8, 1911.

CITIES AND TOWNS.	Population. Census for 1910.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM— Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	670,585	375	95	73	28	17	–	2	2
Worcester,	145,986	68	23	12	3	2	–	–	–
Fall River,	119,295	59	33	32	8	3	1	–	–
Lowell,	106,294	101	35	28	5	2	–	–	–
Cambridge,	104,839	66	22	6	–	5	1	–	–
New Bedford,	96,652	50	32	24	6	3	–	–	–
Lynn,	89,336	45	5	5	–	2	1	1	–
Springfield,	88,926	31	9	13	4	2	–	1	–
Lawrence,	85,892	62	17	14	4	4	–	–	–
Somerville,	77,236	31	5	4	–	1	–	–	–
Holyoke,	57,730	17	4	3	1	2	–	–	–
Brockton,	56,878	9	1	2	–	–	–	–	–
Malden,	44,404	24	6	–	–	–	–	–	–
Haverhill,	44,115	31	6	3	2	–	–	–	–
Salem,	43,697	38	6	4	–	1	3	–	–
Newton,	39,806	13	3	–	–	–	–	–	–
Fitchburg,	37,826	21	6	2	2	–	–	–	–
Taunton,	34,259	22	3	4	1	2	–	–	–
Everett,	33,484	16	4	2	–	1	–	–	1
Quincy,	32,642	10	4	3	2	1	–	–	–
Chelsea,	32,452	25	1	3	1	–	–	–	–
Pittsfield,	32,121	17	3	2	–	2	–	–	–
Waltham,	27,834	18	5	4	2	–	–	1	–
Brookline,	27,792	8	–	–	–	–	–	–	–
Chicopee,	25,401	9	5	4	–	–	–	–	–
Gloucester,	24,398	4	1	–	–	–	–	–	–
Medford,	23,150	11	3	1	–	–	–	–	–
North Adams,	22,019	8	3	3	–	2	–	–	–
Northampton,	19,431	5	1	–	–	–	–	–	–
Beverly,	18,650	7	2	–	–	–	–	–	–
Revere,	18,219	6	1	1	–	1	–	–	–
Leominster,	17,580	7	–	–	–	–	–	–	–
Attleborough,	16,215	1	0	–	–	–	–	–	–
Westfield,	16,044	9	2	3	–	2	–	–	–
Peabody,	15,721	–	–	–	–	–	–	–	–
Melrose,	15,715	4	–	–	–	–	–	–	–
Hyde Park,	15,507	4	1	–	–	–	–	–	–
Woburn,	15,308	9	1	1	–	–	1	–	–
Newburyport,	14,949	12	2	–	–	–	–	–	–
Gardner,	14,699	9	2	3	–	2	–	–	–
Marlborough,	14,579	6	0	2	1	1	–	–	–
Clinton,	13,075	8	1	1	–	1	–	–	–
Milford,	13,055	6	1	2	–	2	–	–	–
Adams,	13,026	3	1	–	–	–	–	–	–
Framingham,	12,948	9	1	–	–	–	–	–	–
Weymouth,	12,895	–	–	–	–	–	–	–	–
Watertown,	12,875	2	0	–	–	–	–	–	–
Southbridge,	12,592	5	2	1	–	–	–	–	–
Plymouth,	12,141	–	–	–	–	–	–	–	–
Webster,	11,509	6	–	1	–	1	–	–	–
Methuen,	11,448	6	–	–	–	–	–	–	–
Wakefield,	11,404	–	–	–	–	–	–	–	–
Arlington,	11,187	5	2	–	–	–	–	–	–
Greenfield,	10,427	5	1	1	–	–	–	–	–
Winthrop,	10,132	4	–	1	–	–	–	–	–
Recapitulation.									
Total of reporting towns,	2,554,219	1,327	361	268	70	62	7	5	3

WEEK ENDING JULY 15, 1911

CITIES AND TOWNS.	Population. Census for 1910.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —					
				Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diphtheria.	Typhoid Fever	Measles.
Boston,	670,585	394	86	81	18	20	3	1	1
Worcester,	145,986	57	14	11	6	3	-	-	-
Fall River,	119,295	80	53	56	5	1	-	-	1
Lowell,	106,294	67	26	13	2	2	-	-	-
Cambridge,	104,839	47	8	9	2	3	-	-	-
New Bedford,	96,652	45	26	24	3	3	-	-	-
Lynn,	89,336	26	9	2	1	-	-	-	-
Springfield,	88,926	31	7	8	2	2	-	-	-
Lawrence,	85,892	45	18	18	1	5	-	-	1
Somerville,	77,236	23	5	4	-	2	-	-	-
Holyoke,	57,730	21	11	3	-	2	-	-	-
Brockton,	56,878	13	3	3	1	1	-	-	-
Malden,	44,404	10	1	1	1	-	-	-	-
Haverhill,	44,115	17	1	-	-	-	-	-	-
Salem,	43,697	17	8	1	1	-	-	-	-
Newton,	39,806	18	2	2	-	2	-	-	-
Fitchburg,	37,826	8	2	2	-	-	-	2	-
Taunton,	34,259	14	2	1	-	-	1	-	-
Everett,	33,484	10	1	2	-	2	-	-	-
Quincy,	32,642	12	1	1	-	1	-	-	-
Chelsea,	32,452	26	7	4	2	-	-	-	-
Pittsfield,	32,121	8	-	-	-	-	-	-	-
Waltham,	27,834	11	1	3	2	1	-	-	-
Brookline,	27,792	8	-	-	-	-	-	-	-
Chicopee,	25,401	9	3	1	-	-	-	-	-
Gloucester,	24,398	7	1	1	-	1	-	-	-
Medford,	23,150	6	-	-	-	-	-	-	-
North Adams,	22,019	3	1	-	-	-	-	-	-
Northampton,	19,431	10	1	1	1	-	-	-	-
Beverly,	18,650	8	1	1	-	1	-	-	-
Revere,	18,219	5	2	-	-	-	-	-	-
Leominster,	17,580	4	1	-	-	-	-	-	-
Attleborough,	16,215	2	1	1	-	-	-	-	-
Westfield,	16,044	7	3	3	-	1	-	-	-
Peabody,	15,721	-	-	-	-	-	-	-	-
Melrose,	15,715	6	1	2	-	1	-	-	1
Hyde Park,	15,507	4	0	-	-	-	-	-	-
Woburn,	15,308	1	0	-	-	-	-	-	-
Newburyport,	14,949	5	1	1	-	1	-	-	-
Gardner,	14,699	4	2	1	-	-	-	-	-
Marlborough,	14,579	4	1	-	-	-	-	-	-
Clinton,	13,075	4	-	-	-	-	-	-	-
Milford,	13,055	2	0	-	-	-	-	-	-
Adams,	13,026	3	1	-	-	-	-	-	-
Framingham,	12,948	4	1	-	-	-	-	-	-
Weymouth,	12,895	-	-	-	-	-	-	-	-
Watertown,	12,875	6	1	1	-	1	-	-	-
Southbridge,	12,592	4	2	1	-	-	-	-	-
Plymouth,	12,141	-	-	-	-	-	-	-	-
Webster,	11,509	5	2	-	-	-	-	-	-
Methuen,	11,448	2	1	-	-	-	-	-	-
Wakefield,	11,404	-	-	-	-	-	-	-	-
Arlington,	11,187	6	2	3	1	1	-	-	-
Greenfield,	10,427	5	3	2	-	-	-	-	-
Winthrop,	10,132	6	-	-	-	-	-	-	-
Recapitulation.									
Total of reporting towns,	2,554,219	1,140	324	268	49	57	4	3	4

WEEK ENDING JULY 22, 1911.

CITIES AND TOWNS.	Population. Census for 1910.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM — Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	670,585	212	81	86	15	15	4	2	-
Worcester,	145,986	37	14	10	4	2	-	-	1
Fall River,	119,295	50	38	34	-	-	-	-	-
Lowell,	106,294	63	35	20	-	5	-	-	-
Cambridge,	104,839	23	9	13	2	4	-	-	-
New Bedford,	96,652	41	22	27	6	3	-	1	1
Lynn,	89,336	19	6	4	-	4	-	-	-
Springfield,	88,926	28	8	10	3	2	-	-	-
Lawrence,	85,892	18	12	9	2	1	-	-	-
Somerville,	77,236	13	2	2	1	1	-	-	-
Holyoke,	57,730	12	6	1	-	1	-	-	-
Brockton,	56,878	12	5	6	1	2	-	-	-
Malden,	44,404	3	2	-	-	-	-	-	-
Haverhill,	44,115	5	1	2	-	1	-	-	-
Salem,	43,697	12	8	1	1	-	-	-	-
Newton,	39,806	10	3	-	-	-	-	-	-
Fitchburg,	37,826	3	1	-	-	-	-	-	-
Taunton,	34,259	21	4	5	2	1	-	-	-
Everett,	33,484	6	-	2	1	1	-	-	-
Quincy,	32,642	8	1	1	1	-	-	-	-
Chelsea,	32,452	12	2	3	1	-	-	-	1
Pittsfield,	32,121	8	-	2	-	1	1	-	-
Waltham,	27,834	7	-	2	1	-	-	1	-
Brookline,	27,792	5	-	-	-	-	-	-	-
Chicopee,	25,401	10	6	4	-	-	-	-	-
Gloucester,	24,398	7	4	1	-	-	-	-	-
Medford,	23,150	5	-	2	1	1	-	-	-
North Adams,	22,019	5	2	1	-	1	-	-	-
Northampton,	19,431	3	1	2	-	1	-	-	-
Beverly,	18,650	4	-	1	-	1	-	-	-
Revere,	18,219	3	1	1	-	1	-	-	-
Leominster,	17,580	1	-	-	-	-	-	-	-
Attleborough,	16,215	2	2	1	-	-	-	-	-
Westfield,	16,044	7	1	3	-	3	-	-	-
Peabody,	15,721	-	-	-	-	-	-	-	-
Melrose,	15,715	3	-	-	-	-	-	-	-
Hyde Park,	15,507	4	-	2	-	2	-	-	-
Woburn,	15,308	7	1	1	-	1	-	-	-
Newburyport,	14,949	4	-	-	-	-	-	-	-
Gardner,	14,699	1	-	1	-	-	-	-	-
Marlborough,	14,579	6	1	3	-	1	-	-	-
Clinton,	13,075	6	2	1	-	1	-	-	-
Milford,	13,055	11	1	4	-	3	-	-	-
Adams,	13,026	3	2	-	-	-	-	-	-
Framingham,	12,948	2	1	-	-	-	-	-	-
Weymouth,	12,895	-	-	-	-	-	-	-	-
Watertown,	12,875	3	1	-	-	-	-	-	-
Southbridge,	12,592	3	-	1	1	-	-	-	-
Plymouth,	12,141	-	-	-	-	-	-	-	-
Webster,	11,509	4	1	-	-	-	-	-	-
Methuen,	11,448	1	1	-	-	-	-	-	-
Wakefield,	11,404	-	-	-	-	-	-	-	-
Arlington,	11,187	1	-	-	-	-	-	-	-
Greenfield,	10,427	2	1	1	-	-	-	-	-
Winthrop,	10,132	2	-	1	1	-	-	-	-
Recapitulation.									
Total of reporting towns,	2,554,219	737	290	271	44	60	5	4	3

WEEK ENDING JULY 29, 1911.

CITIES AND TOWNS.	Population. Census for 1910.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —					
				Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary	Diphtheria.	Typhoid Fever	Measles.
Boston,	670,585	212	88	92	15	18	2	–	1
Worcester,	145,986	30	3	9	3	5	–	–	–
Fall River,	119,295	62	45	47	2	2	–	1	–
Lowell,	106,294	47	26	13	1	2	–	–	–
Cambridge,	104,839	24	10	11	2	4	–	–	–
New Bedford,	96,652	45	25	24	1	6	–	–	1
Lynn,	89,336	20	7	2	–	2	–	–	–
Springfield,	88,926	24	7	8	1	2	–	–	–
Lawrence,	85,892	22	17	16	–	2	–	–	1
Somerville,	77,236	17	4	4	2	2	–	–	–
Holyoke,	57,730	15	5	5	1	4	–	–	–
Brockton,	56,878	9	3	1	–	–	–	–	–
Malden,	44,404	7	3	1	–	–	–	–	–
Haverhill,	44,115	9	1	4	2	–	–	–	–
Salem,	43,697	13	4	–	–	–	–	–	–
Newton,	39,806	9	–	3	–	1	–	–	–
Fitchburg,	37,826	6	3	2	–	1	–	–	–
Taunton,	34,259	11	6	8	2	1	–	–	–
Everett,	33,484	14	3	1	–	1	–	–	–
Quincy,	32,642	6	3	2	2	–	–	–	–
Chelsea,	32,452	15	6	4	2	–	–	–	1
Pittsfield,	32,121	15	3	4	–	2	–	–	–
Waltham,	27,834	8	3	–	–	–	–	–	–
Brookline,	27,792	6	1	1	–	–	1	–	–
Chicopee,	25,401	10	7	7	–	–	1	–	–
Gloucester,	24,398	7	2	–	–	–	–	–	–
Medford,	23,150	3	1	1	–	–	1	–	–
North Adams,	22,019	4	1	–	–	–	–	–	–
Northampton,	19,431	11	2	3	–	–	–	–	–
Beverly,	18,650	2	–	1	–	–	–	1	–
Revere,	18,219	5	2	3	–	1	–	–	–
Leominster,	17,580	2	1	–	–	–	–	–	–
Attleborough,	16,215	1	0	–	–	–	–	–	–
Westfield,	16,044	1	–	–	–	–	–	–	–
Peabody,	15,721	–	–	–	–	–	–	–	–
Melrose,	15,715	1	1	1	–	–	–	–	–
Hyde Park,	15,507	2	–	–	–	–	–	–	–
Woburn,	15,308	4	2	–	–	–	–	–	–
Newburyport,	14,949	3	2	–	–	–	–	–	–
Gardner,	14,699	4	2	1	–	–	–	–	–
Marlborough,	14,579	3	0	–	–	–	–	–	–
Clinton,	13,075	5	–	–	–	–	–	–	–
Milford,	13,055	2	0	–	–	–	–	–	–
Adams,	13,026	2	1	1	–	–	–	–	–
Framingham,	12,948	2	2	–	–	–	–	–	–
Weymouth,	12,895	–	–	–	–	–	–	–	–
Watertown,	12,875	2	1	–	–	–	–	–	–
Southbridge,	12,592	2	1	–	–	–	–	–	–
Plymouth,	12,141	–	–	–	–	–	–	–	–
Webster,	11,509	5	3	4	–	2	–	–	–
Methuen,	11,448	2	2	–	–	–	–	–	–
Wakefield,	11,404	–	–	–	–	–	–	–	–
Arlington,	11,187	0	–	–	–	–	–	–	–
Greenfield,	10,427	3	2	2	–	–	1	–	–
Winthrop,	10,132	3	1	2	2	–	–	–	–

Recapitulation.

Total of reporting towns,	2,554,219	737	312	288	38	58	7	2	4

WEEKLY RETURNS OF DEATHS FROM CERTAIN INFECTIOUS DISEASES.

Deaths from Infectious Diseases not specifically mentioned in above Tables during the Weeks of July 1, 8, 15, 22 and 29, 1911.

Disease.	Place.	Week ending — July 1.	July 8.	July 15.	July 22	July 29.
Cerebro-spinal meningitis,	Boston,	–	1	–	1	1
	Chelsea,	–	1	–	–	–
	Chicopee,	–	2	–	–	–
	Fall River,	1	–	–	–	–
	Lowell,	–	–	–	1	–
	Lynn,	–	1	–	–	–
	Worcester,	–	–	1	–	–
Scarlet fever,	Boston,	–	1	–	–	1
	Chelsea,	–	1	–	–	–
	Westfield,	–	–	2	–	–
	Worcester,	1	–	–	–	–
Whooping cough,	Boston,	2	–	2	2	1
	Brockton,	–	1	–	–	–
	Cambridge,	–	2	–	3	–
	Holyoke,	–	–	1	–	–
	New Bedford,	3	–	–	–	–
Erysipelas,	Boston,	1	–	1	1	–
	Fall River,	–	–	1	–	–
	Hyde Park,	2	–	–	–	–
	New Bedford,	–	1	–	–	–
	Quincy,	1	–	–	–	–
Tuberculosis other than pulmonary.	Attleborough,	–	–	1	–	–
	Beverly,	1	–	–	–	–
	Boston,	3	4	9	3	2
	Brockton,	–	–	1	–	–
	Cambridge,	1	2	1	–	–
	Chelsea,	–	–	–	1	–
	Fall River,	1	1	2	–	–
	Fitchburg,	–	–	–	–	1
	Gardner,	–	–	–	1	–
	Haverhill,	1	–	–	–	1
	Lawrence,	1	2	2	–	–
	Lowell,	–	3	–	2	1
	Marlborough,	–	–	–	1	–
	New Bedford,	–	–	2	–	–
	Newton,	–	–	–	–	2
	Somerville,	2	3	1	–	–
	Springfield,	–	–	1	1	–
	Waltham,	–	1	–	–	–
	Westfield,	–	1	–	–	–
	Worcester,	3	1	–	1	–

DEATHS FROM INFECTIOUS DISEASES, ETC. — *Concluded.*

DISEASE.	Place.	WEEK ENDING — July 1.	July 8	July 15.	July 22.	July 29.
Anterior poliomyelitis, . .	Fall River . .	–	–	–	1	–
	Gloucester, .	1	–	–	–	–
Meningitis other than cerebro-spinal.	Attleborough, .	–	–	–	1	–
	Wakefield, . .	1	–	–	–	–

WEEKLY RETURNS OF CASES OF INFECTIOUS DISEASES.

CASES OF INFECTIOUS DISEASES REPORTED DURING THE WEEKS OF JULY 1, 8, 15, 22 AND 29, 1911.

[Under the provisions of section 52 of chapter 75 of the Revised Laws.]

	WEEK ENDING — July 1.	July 8.	July 15.	July 22.	July 29.	Total.
Diphtheria, ...	102	67	68	69	69	375
Measles, ...	433	242	244	163	85	1,167
Scarlet fever, ...	71	51	65	36	46	269
Typhoid fever, ...	25	35	48	41	50	199
Tuberculosis, pulmonary, . . .	136	81	109	134	118	578
Tuberculosis other than pulmonary,	2	3	1	4	2	12
Cerebro-spinal meningitis, . .	2	5	1	2	1	11
Meningitis other than cerebro-spinal,	1	2	–	–	–	3
Whooping cough, ...	75	72	40	80	48	315
Varicella, ...	26	24	21	23	1	95
Erysipelas,[1]	–	1	–	–	–	1
Mumps,[1]	2	3	–	1	2	8
Ophthalmia neonatorum, . . .	7	23	45	17	25	117
Anterior poliomyelitis, . . .	2	4	1	8	3	18
Malaria, ...	–	–	4	–	–	4
Tetanus, ...	–	–	1	–	1	2
Malignant pustule, ...	–	–	–	1	–	1

[1] Erysipelas and mumps are not diseases notifiable under section 52 of chapter 75 of the Revised Laws. The figures concerning these diseases are, therefore, incomplete.

MONTHLY REPORT ON INSPECTION OF FOOD AND DRUGS.

The following summary presents the results of the examination of food and drugs made by the State Board of Health during the month of July, 1911: —

Articles examined.	Number found to be of Good Quality.	Number adulterated or varying from the Legal Standard.	Total.	Articles examined.	Number found to be of Good Quality.	Number adulterated or varying from the Legal Standard.	Total.
Cider,	1	–	1	Meat products: —			
Cocoa,	1	–	1	Sausages,	1	1	2
Condensed milk,	1	1	2	Tongue cheese,	1	–	1
Confectionery,	2	–	2	Milk,	243	140	383
Cream,	10	–	10	Nonalcoholic drinks,	3	–	3
Cream of tartar,	1	–	1	Pickles,	1	1	2
Drugs,	59	6	65	Salad dressing,	1	–	1
Eggs (broken),	6	20	26	Spices,	2	–	2
Flavoring extract: —				Syrup,	1	–	1
Vanilla,	1	–	1	Table sauces,	2	–	2
Jam,	1	–	1	Vinegar,	2	2	4
Malt liquors,	8	–	8	Yeast extracts,	2	–	2
Meat products: —							
Hamburg steak,	1	–	1	Total,	352	171	523
Jellied meat,		–	1				

The samples of drugs found to be adulterated were: alchohol (denatured), spirit of peppermint and proprietary medicines.

The cities and towns in which samples were collected were: Ayer, Boston, Brockton, Brookline, Burlington, Cambridge, Chelsea, Falmouth, Franklin, Hingham, Holyoke, Hull, Hudson, Lowell, Lynn, Malden, Marblehead, Maynard, Medford, Milford, Natick, New Bedford, Quincy, Saugus, South Framingham, Springfield, Upton, Waltham, West Springfield, Whitman, Williamstown, Winchester, Woburn and Worcester.

PROSECUTIONS FOR VIOLATIONS OF THE LAW RELATING TO FOOD AND DRUGS.

Thirteen convictions were secured during the month of July, 1911, for selling adulterated food and drugs, as follows: —

No.	Name of Defendant.	Place.	Character of Article sold.
1	Horace W. Hosie,	Franklin,	Alcohol (denatured).[1]
2	Eben A. Walton,	Franklin,	Alcohol (denatured).[1]
3	Daniel Bouyotes,	West Lynn,	Butter (oleomargarine).
4	Alex. W. Cunningham,	Springfield,	Camphor liniment.
5	Theodore Balser,	Natick,	Milk (total solids, 11.05).[2]
6	Daniel Bouyotes,	West Lynn,	Milk, skimmed (not marked).
7	William A. Cooper,	Townsend,	Milk (total solids, 11.80).[2]
8	Morris Gissin,	Springfield,	Milk (total solids, 9.50).[2]
9	Knot V. Martin,	Marblehead,	Milk (total solids, 10.82).[3]
10	Stephen C. Martin,	Marblehead,	Milk (total solids, 10.22).[3]
11	John Ryan,	Wayland,	Milk, skimmed (not marked).[3]
12	Thomas H. Shaw,	Holliston,	Milk.[2]
13	Chas. E. Woodward,	Natick,	Milk (total solids, 10.04).

[1] Not labeled. [2] Watered. [3] Appealed.

Fines imposed, $375.

LIST OF IMPROPERLY LABELED FOODS, ETC., FOR JULY, 1911.

Number of Sample.	Character of Sample.	Name of Manufacturer, Wholesaler or Producer.	Results of Analyses.
15065	MacDonald's Astringent Hair Tonic.	MacDonald Toilet Specialty Company, Detroit, Mich., .	Contained alcohol; percentage not stated.
9012 N	Spirit of peppermint, .	Gilchrist Drug Company, Boston, Mass., . . .	73.7 per cent.; U. S. P. strength.
q 7270	Denatured Alcohol, .	F. H. Porter, Wellesley, Mass., ...	Improperly labeled.
q 7369	Milk, ...	Andrew Szala, North Dartmouth, Mass., ...	Total solids, 10.13 per cent.; fat, 3.00 per cent.; contained added water.
q 7301½	Milk, ...	John Baben, Hudson, Mass., ...	Total solids, 11.58 per cent.; fat, 2.60 per cent.; proteid, 3.18 per cent. skimmed milk.
q 7309	Milk, ...	Walter T. Hanscom, Bolton, Mass., ...	Total solids, 11.31 per cent.; fat, 3.60 per cent.; contained added water.
q 7310			Total solids, 11.30 per cent.; fat, 3.50 per cent.; contained added water.
15050	Milk, ...	Geo. P. Apostolu, Surfside, Nantasket, Mass., . . .	Total solids, 11.06 per cent.; fat, 2.40 per cent.; proteid 3.06 per cent. skimmed milk.
15013	Milk, ...	Joseph B. Smith, Whitman, Mass., ...	Total solids, 11.50 per cent.; fat, 3.75 per cent.; contained added water.
8205 R	Milk, ...	G. Edward Winn, Burlington, Mass., ...	Total solids, 10.24 per cent.; fat, 3.00 per cent.; contained added water.
8207 R			Total solids, 10.90 per cent.; fat, 3.00 per cent.; contained added water.
8215 R			Total solids, 10.26 per cent.; fat, 3.20 per cent.; contained added water.
8217 R			Total solids, 10.12 per cent.; fat, 3.10 per cent.; contained added water.
8227 R			Total solids, 10.12 per cent.; fat, 3.40 per cent.; contained added water.

INSPECTION OF DAIRIES.

During the month of July, 1911, 46 dairies were examined in the following places:—

Place.	Number examined.	Number found to present no Objectionable Features.	Per Cent.	Number concerning which Letters were sent.	Per Cent.
Granby,	–	–	–	–	–
Second inspection,	1	–	–	1	100.00
Lakeville,	1	–	–	1	100.00
Mattapoisett,	35	13	37.14	22	62.86
Second inspection,	8	4	50.00	4	50.00
South Hadley,	–	–	–	–	–
Third inspection,	1	1	100.00	–	–

Total number of dairies examined,	46
Number found to be free from objectionable conditions,	18
Number concerning which letters were sent,	28
Total number of conditions to which attention was called,	76
Percentage of dairies which passed inspection,	39.13

The names of the owners of the dairies found to be worthy of commendation follow:—

Mattapoisett.

Class B.

Austin, Charles
Austin, George A.
Church, Harry
Denham, H. L.*
Ellis, Charles W.*†
Gamans, W. A.*†
Gamans, W. H.*
Hammond, Arthur
Hiller, Benjamin
Hiller, Edw. B.
Mattapoisett Town Farm
Randall, J. L.
Rowland, Ernest
Sisson, John
Smith, Arthur
Sparrow, Frank M.
Vokes, Thomas

South Hadley.

Class B.

Brockway, Horace T.*†

* Second inspection. † Reported favorably on first inspection.

AN INVESTIGATION CONCERNING INFANTILE PARALYSIS AS IT OCCURRED IN THE CITY OF FALL RIVER IN 1910.

In the summer of 1910 there occurred in Fall River an epidemic of infantile paralysis of considerable extent. The exact number of cases occurring in this epidemic is not important for the present purpose, nor did the general study of ages, grouping dates of onset, etc., show anything of especial importance. The locality was studied by Dr. T. P. Hennelley, who was delegated for the purpose by the Board. The most important part of the investigation seems to be in the results of the study of contact of the cases, the frequency of indefinite illnesses in the same family or neighborhood, and the curious tendency of the disease to remain for years in one locality, with also a tendency to recurrence in the same family. The cases will be presented individually, with such points as seem of interest noted.

The study of the cases with regard to transmission, in a crowded district among a foreign-born population, is naturally not a matter which can be dealt with with scientific exactness, but available facts bearing on each case can be presented and reasonable inferences pointed out.

The cases to be presented seem to suggest that in most instances there was present direct or indirect contact with a positive case or a case of illness which was possibly abortive infantile paralysis.

To facilitate the study of the case, the case numbers are here grouped to indicate what the individual cases suggest from an etiological point of view.

Suggesting contact with cases of indefinite illness: —
1, 7, 11, 12, 15, 17, 21, 23, 27, 28, 29, 32, 33, 35, 37, 38, 41, 42, 49, 50, 51, 61, 62, 65, 66, 69.

Suggesting direct contact with positive case: —
18, 23, 31, 44, 52, 55.

Suggesting indirect contact with positive case: —
26, 32, 38, 41, 43, 52, 57, 70.

Suggesting transmission, direct or indirect, to another case: —
4, 10, 14, 18, 19, 29, 40.

Persistence of the disease in a given locality: —
1, 21, 25, 65.

Previous occurrence of paralysis in same family: —
3, 4, 8, 56.

Association with domestic animals possibly or definitely diseased: —
1, 2, 20, 27, 33, 49, 66, 68, 72.

Of interest for other reasons: —
6, 45, 67.

INFANTILE PARALYSIS
IN THE CITY OF FALL RIVER IN 1910.

WESTPORT
WATUPPA RESERVATION
RALPH'S NECK
NORTH WATUPPA POND
SOUTH WATUPPA POND
WATUPPA RESERVATION
PUMPING STA
WATUPPA RESERVATION
WATUPPA RESERVATION
BLOSSOM ROAD
Blossom Brook
Tarry Brook
MERIDIAN ST
8
9
9
8
7
5
3
OAK GROVE CEM
ST PATRICKS CATH CEM
MT PLEASANT
FATHER MATHEW CEM
OAK GROVE
BORDER CITY
SLADE'S FERRY
TAUNTON RIVER
MOUNT HOPE BAY
COOK POND
ST MARY'S CEMETERY
ST VINCENT ORPHANS HOME
NEW BOSTON
Cross Brook
Sucker Brook
Steep Brook
Quarry Hole Brook
Copicut Brook
Miry Brook
Cook Brook
FREELOVE ST
RESERVOIR
MARION
OGDEN
SHERMAN
BODGE
SAVOIE
HOPKINS
OAK
GROVE
JOHNSON
BECKET
MELD
COLT
QUARRY
PHILLIPS
HERBERT
BULLOCK
CHARLOTTE
GANSETT
WARD ST
WASHINGTON
ROBESON
OLD COLONY
MADISON
HIGHLAND AVE
CRESCENT
NORTH MAIN
WILLARD
ALDEN
ROYAL
SUNRISE
MORRISON
SUNSET
CANDY
HAMILTON
WEBSTER
PARKER
ANTHONY
ARTHUR ETHEL
CLARENCE
BRIGHTON
HIGH
ELM
ROCK
UNION
BELMONT
PLEASANT
ELSBREE
WESTERN
PLYMOUTH
ROCKLAND
NORWOOD
ST CLOUD
MARIE
BUCHAN
ST
ANNE
ROBERT
ROBERTA
ROBERTS
ROBERTSON
ROBERTSON
OLD COLONY
MADISON
HIGHLAND AVE
HIGHLAND
CRESCENT
NORTH MAIN
WILLARD
ALDEN
ROYAL
SUNRISE
MORRISON
SUNSET
CANDY
HAMILTON
WEBSTER
PARKER
ANTHONY
ARTHUR ETHEL
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PLEASANT
ELSBREE
WESTERN
PLYMOUTH
ROCKLAND
NORWOOD
ST CLOUD
MARIE
BUCHAN
ST
ANNE
ROBERT
ROBERTA
ROBERTS
ROBERTSON
ROBERTSON
OLD COLONY
MADISON
HIGHLAND AVE

INFANTILE PA
IN THE CITY OF BALL

Fall River is a manufacturing city of 119,295 inhabitants and all parts of the city are in close proximity to water. The Taunton River forms its western border, the Watuppa, north and southeastern borders, while the Quequechan River almost divides the city in two by its course westward from South Watuppa Pond.

In most instances more than one family lived in the same house and all used the same entrance stairway. More than one-half of the houses were closely packed together, with little or no intervening space.

Grape vines were present in many of the yards. Some yards were grassed over; others were composed of gravel or cinders.

Only one case (28) occurred in either of the two orphan asylums, and the large majority of cases occurred in French-Canadian families.

Almost all the patients visited one of three beaches on the Taunton River, but in the vicinity of none of these beaches were cases present, except that, at Lanagan's Beach, in the extreme north end of the city (Steep Brook cases), three and possibly four cases occurred within a radius of one hundred to four hundred yards. Most of the cases occurred in those districts where children of susceptible age were most numerous and where sanitary conditions were poorest.

Various dealers in vegetables, milk, etc., come into Fall River daily. Most of these come from Westport, Somerset or Swansea.

In only one case did a milkman leaving milk in Fall River have a positive case in his family. A suspicious illness, however, occurred in the family of another milkman residing and delivering milk to Fall River. There was a child with a positive case in the next house.

Case No. 1.

Female, two and one-half years. This case is of interest in two respects. First, the child had a typical attack of the disease from May 5 to May 10, 1910, followed by loss of power in the right leg, with recovery from the paralysis in about a month. On June 28, 1910, fever, diarrhœa, etc., again came on, followed by tenderness in the legs and inability to walk. A month later the child was able to stand, but showed toe drop in the right leg and double flat foot. The case, of course, was not observed carefully enough to warrant a definite statement that two attacks occurred, but the history and examination of the case suggested it strongly.

At the time of the first attack a sister was ill with vomiting and constipation.

Secondly, the neighborhood seemed particularly liable to the disease. In the same room a case had occurred seven years before; 150 yards away a case fourteen years before; 50 yards away a case two and one-half years before; and in the immediate neighborhood two other cases had occurred two and two and one-half years before.

Six cases had thus occurred in previous years in this immediate neighbor-

hood, as shown by the map. A cat in the family had been affected by a throat trouble for three or four years, and choked when it ate. The child had played much with this cat.

The case shows the persistence of the disease in a given locality.

Case No. 2.

Female, one and one-third years. Russian Jew. Father a dealer in skins of cows, stored in barn.

District congested, and no definite history of contact. Two other children, six and three and one-half years, not affected.

Case No. 3.

J. H., male, one year and five months. Onset, June 7, 1910; paralysis, June 11, 1910. Father a second hand in spinning room.

Child's mother has cousin whose son (now twenty years old) had anterior poliomyelitis at two years of age. No direct contact. Two deaths in same family previously.

(1) Two-year-old boy, about Thanksgiving, 1907, suddenly ill with fever, stupor, lasting one day; paralysis of one leg noted a few days later.

(2) Four-year-old boy, taken suddenly ill Jan. 28, 1908; fever, vomiting, stupor, inability to swallow. Died Jan. 31, 1908. Before death became very red in face.

Summary. — A previous case in a distant relative and two previous deaths in family, possibly from infantile paralysis.

Case No. 4.

M. H., female, two years. Onset, June 11, 1910; paralysis, June 12, 1910. Father a laborer.

Three years ago, at a different address, an older child in the family had infantile paralysis. There is no knowledge of contact with a known case, but four children in the next house (same yard) are playmates. One of these children, age one year, about two weeks after the onset of case No. 4 had an attack of diarrhœa, vomiting and fever, lasting two days. No physician was called and the child apparently recovered. On examination it was found that this child used both legs with equal strength, but there was atrophy and flatness of the outer aspect of the upper part of left thigh. Across the street from the house of case No. 4 is a barn with several hens, and with manure in the yard.

Summary. — No history of contact. Possible transmission to another child.

Case No. 5.

B. C., female, seventeen months. American French-Canadian. Onset, June 13, 1910; paralysis, June 16, 1910. Death from broncho pneumonia, due to measles, July 10, 1910.

No positive case known in vicinity. Mother, without baby, however, recently visited in infected districts on Lowell and Nashua streets. Another child died in February, 1909, of "brain fever," being possibly a case of infantile paralysis, although the season of the year makes it unlikely.

Summary. — No known contact. Possible previous case in family.

Case No. 6.

E. C., male, sixteen months. American. Onset, June 17, 1910; paralysis, June 27, 1910.

Excellent grass yard, high elevation, no traffic on street. Father drives a team collecting wet wash and soiled clothes, which come in all sorts of receptacles. His route, however, is mostly confined to a district which was little affected. In fact, at the time of onset no case was known in this district, and the father collected no laundry from a house where a positive case occurred, nor, in fact, from any house where he knew positively of any illness. He does not touch the clothes, but does handle the baskets, bags, cans, etc., coming from the houses. Flies and mosquitoes very numerous around the house and yard.

Summary. — Case with no known contact. Possible source of infection in soiled clothes.

Case No. 7.

A. L., female, twenty-two months. French-Canadian. Onset, June 17, 1910; paralysis, June 19, 1910. Father keeps grocery store. Other children, six, five and three and one-half years.

Noteworthy is the occurrence of several minor illnesses in children of the neighborhood about the same time. The family live under very good conditions. In the yard behind house is a shed which was formerly used as a barn, and which contains a privy. The privy has not been used for two years, however. The physician in this case prescribed syrup of iodide of iron, which tasted so good to the well children that they licked the spoon after the sick child had used it. This occurred several times, but no illnesses resulted in three children of the same family, six, five and three and one-half years old.

Contemporary Illnesses in Neighborhood. — (*a*) Two children with fever and threatened convulsions early in June. (*b*) Early in June baby with fever, vomiting and diarrhœa, and inability to walk; recovery in few days. (*c*) Baby with summer complaint. (*d*) Child with summer complaint, July 3.

Summary. — Possible abortive cases in neighborhood, as shown by preceding or contemporary illnesses. Failure to infect of a spoon contaminated with secretions of mouth of a patient in acute stage of disease.

Case No. 8.

D. G., male, three years eleven months. French-Canadian. Onset, June 19, 1910; paralysis, June 22, 1910. Another child of fourteen months not affected.

Father had infantile paralysis at two years, when living in Canada, and is still lame. Family lived under excellent conditions, except for numerous mosquitoes beneath the trees in the back of grass yard, and of ants in the grass. Many children in the neighborhood came in contact with this child. Mother knew of no illnesses. This patient presented on arms and legs numerous pigmented spots, representing infected mosquito bites of varying ages.

Case No. 9.

E. F., female, fifteen months. American. Onset, June 21, 1910; paralysis, June 28, 1910. Father a fish dealer.

This case occurred most probably at the home of the grandmother, where child remained while mother was working in the mill. This was one of the earliest cases in Fall River, yet this district was the least infected of any in the city.

Case No. 10.

A. K., male, four years three months. American Jew. Onset, June 21, 1910; paralysis, June 21, 1910. Father a fruit and vegetable pedler.

This was an extremely transient case, but was the first of three cases in different families. Nos. 10 and 18 were playmates, and Nos. 18 and 55 were playmates. All these cases occurred within 25 yards of each other. No other children in the same house ill. No. 10 and No. 18 ate cherries which grew in the back yard of No. 10.

Case No. 11.

J. W. W., male, four years. American. Onset, June 21, 1910; paralysis, June 28, 1910. Father a coal merchant.

This case lived with a grandparent in the north end of the city. A sister, eighteen months old, living with the mother, 400 yards away, had a combination of illnesses, starting about January, 1910, and ending in May, 1910, at which time the child's mother noticed that the child's feet turned in. The two children frequently came in contact with each other. Several children who came in contact with case No. 11 had mild illnesses before or after the onset of this case. During the onset of the disease the patient attended a party, at which several of these children were present, but no positive case of infantile paralysis followed.

Summary. — Contact with possible abortive case in sister. Other possible abortive cases before and after, in other playmates.

Case No. 12.

A. M., male, four years eight months. American. Onset, June 22, 1910; paralysis, June 23, 1910. Father a carpenter. Two other children, one two years old and one eleven days old, not affected.

A playmate of this case, living 100 yards away, had a suspicious illness two weeks before, just previous to which the two picked and ate some green huckleberries. None of the numerous (30 or 40) playmates of this case ever

came down with paralysis. Some excavating had been done in front of the house within two or three months of onset. No positive case in the near neighborhood.

Summary. — Possible abortive case in playmate.

Case No. 13.

B. V., female, twenty months. French-Canadian. Onset, July 23, 1910; paralysis, July 25, 1910.

The neighborhood in which this case occurred is one of the most unsanitary in Fall River, and was probably an infected neighborhood. The case was within 150 yards of case No. 27, but no contact between the children was recorded. Communication between the families probably occurred.

Summary. — Possibly acquired from case No. 27 by indirect transmission.

Case No. 14.

H. H., male, age five years. French-Canadian. Onset, June 24, 1910; paralysis, June 25, 1910. Father a hand carder.

The younger child in this family probably had a mild attack of infantile paralysis shortly after this boy. There were also visits to a family in which there is a girl of thirteen, who, when six years old, had anterior poliomyelitis, and in the next house to whom lives a family in which a mild positive case occurred in 1910.

June 17 went to circus (horses and other animals, manure, etc.).

Case No. 15.

H. D. A., male, one year eleven months. Irish-American. Onset, June 26, 1910; paralysis, June 30, 1910. Father a bartender.

Lived near case No. 4. Two cases of gastro-enteritis in family on floor above. One had difficulty in eating and breathing.

Case No. 16.

J. A., male, two years. Irish-American. Onset July 5, 1910; paralysis July 5, 1910. Other children, 13, 11, 9, 7, and (2) years old. Father a janitor of public school.

This is the only case occurring in this vicinity.

Case No. 17.

G. G. C., female, two years. English-American. Onset, July 5, 1910; paralysis, July 9, 1910.

Patient lived under very good conditions. Played in excellent grass yard; no contact with great number of children. A few children in immediate neighborhood had indefinite illness at the same time.

Case No. 18.

R. B., male, four years nine months. French-Canadian. Onset, July 5, 1910; paralysis, July 6, 1910.

Two positive cases were connected with this case, one of which, No. 10, occurred previous to this case, and one, No. 55, occurred after. No. 18 probably contracted the disease from case No. 10. They ate cherries in common, picked in yard of No. 10. No. 18, after his illness, was in contact with No. 55, who fell ill later with infantile paralysis. Many children in the neighborhood. No other positive cases in the near neighborhood reported, except that baby of this family shortly after had fever and diarrhœa.

Apparent instance of direct contact and transmission to another child.

Case No. 19.

H. W. D., male, one year six months. American. Onset, July 5, 1910; paralysis, July 6, 1910.

This case occurred in a very good residential section of the city, living under the best of conditions. Up to two weeks previous to onset this family had been living for five weeks at a relative's house in Tiverton, in an ideal place, isolated and located on a peninsula extending into the Seconnet River. The child's most intimate companions were his sister and case No. 23, who lived in the next house, and who later fell ill with infantile paralysis. No other cases occurred in the near neighborhood previously. Case No. 23, the most intimate playmate, fell ill with anterior poliomyelitis a few days later. The older sister of No. 19 lived in the house with the younger (positive case) for four days after onset. The older child was then sent to the home of the same relative in Tiverton, R. I., and about ten days later is said to have developed a limp.

Case No. 20.

L. M., female, four months. American. Onset, July 7, 1910; paralysis, July 11, 1910.

This is the youngest case in the series, and was said to be purely breast fed. The locality is an infected one. The patient came in contact with no known case. A week before onset, however, child ate a little ice cream from a cone, bought at a little store. The three-year-old sister ate from the same cone and was not affected. A grocery store, kept by father of another case, is underneath this tenement.

Many rats were found dead at this time.

Case No. 21.

E. S., male, two years. Irish-American. Onset, July 8, 1910; paralysis, July 10, 1910. Father a janitor.

Mrs. W., now of Taunton, Mass., is said to have a child ill with infantile paralysis. The W.'s until recently lived close to the S. family in Fall River,

and there was probably contact between the children. The child of a neighbor, about seven days before the onset of this case, had an attack of illness with fever, vomiting and diarrhœa, but no paralysis. Contact with this child took place at a lawn party four days before onset of the present case. Two 1909 cases were close by.

Case No. 22.

G. S., male, six and one-half years. Irish. Onset, July 19, 1910; paralysis, July 11, 1910. Father kept grocery store.

Case occurred early in July and at once fell in the hands of a so-called bone specialist, who treated it for several weeks as a dislocated shoulder. No known case in contact or in neighborhood. Patient is a private school child. A four and one-half year old sister had a slight digestive upset a few weeks before.

Case No. 23.

A. D., female, twelve years. American. Onset, July 10, 1910; paralysis, July 12, 1910.

This case is to be taken in connection with case No. 19. An illness, possibly an abortive case, occurred in a child who lived across the street, and who played with this child in the hammock on the second day of her illness, the day previous to the appearance of paralysis.

No. 23 played with case No. 19 and the sister. She had kissed the younger at the time of onset of its illness. On an indefinite day in July she ate cherries in the yard of case No. 19, and for one day was ill with vomiting, diarrhœa and fever. On July 6 she went with father and mother to Boston. It was a very hot day and on getting home patient went to bed immediately, on account of headache. Family ate ice cream cones practically every night, bought from a man passing the house.

A cousin two years ago lost the use of her legs for a year.

Associated Illnesses. — A. G. was ill with vomiting two or three days in the last few days of June. There was contact with case No. 23.

J. B., another neighbor, was ill for a week beginning July 5 with intestinal trouble. The last time in contact with case No. 23, July 2.

Case No. 24.

L. H., female, five years. French-Canadian. Onset, July 10, 1910; paralysis, July 12, 1910. Other children, 8, 6, (5), 4, and 1½ years old.

Case occurred in an unsanitary and infected district. Visited and was visited by persons living in the immediate vicinity of two positive cases, respectively, cases Nos. 29 and 38. No other or definite source of contagion known.

Case No. 25.

E. M., male, two years two months. French-Canadian. Onset, July 12, 1910; paralysis, July 14, 1910. Parents are mill hands.

This child lived six days of each week at the home of the father's sister.

where a child, case No. 44, came down with infantile paralysis almost three weeks later. This case was in an infected district, with numerous possibilities of contact.

Cases suggest either the infection of a house by No. 25 or a common source of infection for Nos. 25 and 44.

Case No. 26.

A. C., male, ten months. Portuguese. Other children, 12, 10, 6 years, and 10 months old. Onset, July 12, 1910; paralysis not seen until July 26, 1910. Father a laborer.

This case is probably to be connected with case No. 50, living in the front of house. No direct communication or contact between the two positive cases, but indirect contact by carriers is possible. Many children in yard.

Case No. 27.

O. F., male, three years. French-Canadian. Onset, July 14, 1910; paralysis, July 15, 1910. Other children, 11, 10, 9, 8, 4, (3), and 1 year old.

This case lived in a very unsanitary district, under bad conditions. Many suspicious cases of illness in the vicinity (see case No. 13). There were six other children in the family, but no others were affected.

The children of the house visited daily the family (six children), within 75 yards of case No. 13. One of these children died the same week as case No. 27. Diagnosis not known.

Dead cat found in cellar one week before onset. Had been killed by boys, but was said to be sick at the time.

Case No. 28.

I. F., female, five years. Orphan asylum. Onset, July 16, 1910.

The patient was only out of the institution for two days in six months, and then to attend the father's funeral, which took place from the next house to that in which a 1908 case occurred, and is only 25 yards from the fatal case No. 62.

The sister who teaches in the ward where this child lived was visited by case No. 32 previous to her onset. The two positive cases, however, never came in contact and are not related to each other. The child received visits, however, from mother and two adult sisters from time to time. No cases of infantile paralysis in the institution for the past two or three years. Among children who entered the home about the time of onset of this case were two or three who had digestive upsets, and one could not walk temporarily.

Case No. 29.

A. M., female, three years. French-Canadian. Onset and paralysis, July 18, 1910. Other children, 4, (3) and 1 year old. Father a mill worker.

This case and case No. 38 live in adjacent houses, with fence between. A sister of case No. 29 was ill with headache and fever about two weeks before

the onset of this case, — the illness lasting twenty-four to forty-eight hours. Examination of the sister reveals the slightest possible atrophy of the right lower leg, with very slight eversion of feet.

Contact with case No. 38 by means of the well children in the yard. Case No. 38 occurred a few days later.

Case No. 30.

H. Y., female, six years. American. Onset, July 18, 1910; paralysis, July 22, 1910.

This is a case occurring in the extreme north end of the city. The house on the left had a positive case two weeks before. The house on the right had a suspicious abortive case one month before. No. 30 frequently played with and took care of a possible abortive case.

Case No. 31.

E. D., male, four years. English. Onset and paralysis, July 19, 1910.

This case undoubtedly had contact frequently with a case of paralysis occurring about two weeks before.

Case No. 32.

I. F., female, fourteen years. French-Canadian. Onset, July 19, 1910; paralysis, July 22, 1910. Other children, (14), 11, 10, 8, 7, 5, 3, and 1 year old.

This case occurred directly across the street from case No. 41, which had its onset ten days later. Curiously enough the oldest child of a family of nine fell ill with the disease in this instance. The eight-year-old child had a probable abortive attack two weeks before. She came in contact with the children of the family of case No. 41.

This case, two days before onset, visited at St. Joseph's Asylum, and there came in contact with the teacher who taught case No. 28.

All the children of this family played with a sister of case No. 41. No contact, however, between actual patients.

Summary. — Probable abortive case in sister; contact with children from a house where a case occurred ten days later; contact with the teacher of a positive case.

Case No. 33.

H. O'N., female, seven and one-half years. American. Onset, July 20, 1910; paralysis, July 21, 1910. Other children, (7½), 6, and 2 years old. Father a letter carrier.

A suspicious illness in baby two weeks before. No positive case in neighborhood. Neighbor keeps cat hospital in house behind.

Case No. 34.

M. F., female, two years nine months. Onset, July 21, 1910; paralysis, July 24, 1910. Father a carpenter.

This case had been at a summer resort near Fall River for almost a month, except for returning to Fall River with mother every Friday for a few hours to collect rents.

No positive case in neighborhood either in Fall River or Ocean Grove.

Case No. 35.

D. P., female, two years. Irish. Onset, July 22, 1910; paralysis, July 26, 1910.

This case occurred in a probably badly infected district, as a case (No. 40) occurred 50 yards up the street a week later.

A playmate of this child, seven years of age, was ill at the same time for a few days and died. Three physicians previous to death diagnosticated the illness as cerebro-spinal meningitis. Death occurred four days after onset of illness of case No. 35.

Case No. 36.

H. L., male, twenty-eight months. French-Canadian. Onset and paralysis, July 22, 1910. Father a laborer in gas works. Two brothers and a sister are weavers in a mill. Other children in family, 12, 10, 7 years, (2 years 4 months) and 4 months old.

Case No. 37.

J. L. B., male, five years. American. Onset, July 23, 1910; paralysis, July 26, 1910. Father a belt maker.

Baby sister, two weeks before July 4, had fever for several hours, followed by convulsions. Perfect recovery.

Case lived in sparsely settled country in outskirts of city. No positive case in the vicinity. No contact with positive case, but many children in neighborhood had suspicious illnesses.

A boy, 10 years old, early in June lived in the same house. He had an attack of vomiting, diarrhœa and cough, and was ill three days. Recovered and moved to another neighborhood, where three cases occurred later, — namely, Nos. 10, 18 and 55.

Summary. — Possible infection from doubtful illness in sister and possible connection by means of house with another case of doubtful character.

Case No. 38.

E. S., female, eighteen months. French-Canadian. Onset, July 24, 1910; paralysis, July 25, 1910. Other children in family, 9, 5½, 3 years, and (18 months) old. Mother and father work in the mills. Three-year-old child had diarrhœa, vomiting and fever a short time before.

This case is probably connected with a case occurring earlier, No. 29, who lived in next yard and had same playmates. Indirect contact by means of well children in the respective families. Many children in the yard, but no other positive case.

Several suspicious abortive cases in the vicinity. Neighborhood is crowded with children and is very unsanitary.

Case No. 39.

E. M., female, five years. English. Onset and paralysis, July 25, 1910. Father a helper in mill.

The mother of this case in January, 1910, developed a cold in the head which lasted three days. She then felt well for two weeks, and then suddenly was taken with general pain, severe headache and inability to move arms or legs, — had to be carried. It was six weeks before she could walk and three months before the pain entirely disappeared.

A child, seven years, living in the next house, is a cousin of case No. 43. This child was visiting at Flint village, where she developed a febrile attack for two days, just about one week before onset of No. 39. The parents, being afraid that their child was going to die, called in the parents of No. 39 to take care of the child.

Case No. 40.

F. L., male, three and one-half years. Irish-American. Onset, July 28, 1910; paralysis, July 29, 1910. Father a laborer. Other children in the family, 13, 8, (3½) years, and 3 weeks old.

Infected district, and case No. 35 occurred in the immediate neighborhood a week previously. Contact with M. F., four years, who, until early July, lived within 40 yards, and who moved to Rhode Island, and there one week later developed infantile paralysis.

Case No. 41.

L. L., female, six years. French-Canadian. Onset, July 29, 1910; paralysis, Aug. 1, 1910. Father a weaver. Other children, 9, 9, (6) years, and 16 months old.

This case lived directly across the street from case No. 32. No contact between cases, but contact existed between the other children of both families. District is infected and unsanitary.

Several suspicious cases of illness, possibly abortive cases, occurred in same family at about the same time. Patients played with the well children of the family of case No. 32 across the street.

Summary. — Indefinite illnesses in family and proximity to a case occurring about ten days earlier.

Case No. 42.

A. C. R., male, two years. Portuguese. Only child. Onset, July 29, 1910; paralysis, July 30, 1910. Father conducts a grocery store in adjoining house.

Seventeen-months-old child, up stairs, ill with stomach trouble about a week before. Case No. 63 occurred 40 yards away, but no known contact occurred with positive case.

Case No. 43.

N. D., male, eighteen months. French-Canadian. Onset, July 30, 1910; paralysis, July 31, 1910. Only child. Father a mill spinner.

The mother of this case was acquainted with the families of cases Nos. 39, 36, 52 and 46, but denied contact with these cases. The patient was in contact with many children, — mostly in her own yard.

The parents of case No. 43 had a relative living in next house to case No. 39, and cared for a sick child in this relative's family just previous to the attack in their own child. (See No. 39.) A girl, three years old, living down stairs in the next house, had sore throat, headache and fever one week before.

Case No. 44.

B. O., female, seven years. French-Canadian. Onset, July 31, 1910; paralysis, Aug. 3, 1910. Nine other children, 24, 23, 18, 16, 14, 12, 11, 9, (7), and 2 years old. Father a stove driller.

This case is connected with case No. 25. When case No. 25 was ill, case No. 44 visited the house.

Case No. 45.

E. F., male, three and one-half years. American. Onset, July 31, 1910; paralysis, Aug. 3, 1910. Father a letter carrier. One other child in the family, four months old.

Probable connection with case No. 47 and with a very suspicious mild case. None of this patient's intimate companions was ill.

Father delivers mail at the house of a case which occurred about July 19, the full report of which it was impossible to obtain.

An aunt of case No. 47 took care of No. 47 while the mother worked, and was visited by the mother of No. 45 frequently. The last visit was two weeks before the onset of case No. 45.

Evidence of contagion in this case is very slight, but the district is infected.

Case No. 46.

J. St. G., female, three and one-half years. French-Canadian. Onset, July 31, 1910; paralysis, Aug. 2, 1910. Father a weaver. One other child, five and one-half years old.

This case was a light one. No paralysis found at time of investigation. This case lives on floor above a physician, who reported several cases of infantile paralysis. The patient visited almost daily a relative at a house within 20 yards of the positive case No. 36.

Contact between this relative and family of case No. 36 is quite certain. The district is an infected one.

Case No. 47.

R. C., male, five and one-half years. English. Onset, Aug. 4, 1910; paralysis, Aug. 6, 1910. Other children, 18, 17, and (5½) years old. Mother works in the mill.

This case is probably connected with case No. 45. Many children came in contact with this child at Playgrounnd Park near by North Park.

Case No. 48.

M. M., female, one year. Portuguese. Onset, Aug. 4, 1910; paralysis, Aug. 5, 1910. Fatal case. Mother works in the card room of the mill. Other children, 20, 18, 16, and (1) year old.

No definite information obtained, owing to difficulty of making family understand. Rather a sparsely settled district, with many children, however. Families are all Portuguese or French-Canadians. Child lived under very unsanitary conditions.

Case No. 49.

A. V., female, three years. French-Canadian. Onset, Aug. 5, 1910; paralysis, Aug. 8, 1910. Fatal case. Father and mother cotton mill hands. Other children, 15, 11, 6, and (3) years old.

This case is to be taken in relation with a cat which died at almost the same time after an illness of a few hours.

The child was taken ill August 5 and died August 8. During the illness the cat was in bed with the patient. During the day of August 8 the cat was taken ill, became paralyzed in extremities and died at 7 P.M. The child died at 9.30 P.M. Many suspicious (abortive) cases in neighborhood, particularly on first floor of the same house.

Case No. 50.

A. St. P., male, thirteen months. French-Canadian. Onset, Aug. 5, 1910; paralysis, Aug. 8, 1910. Father a fan tender in mill. Nine other children, 23, 18, 16, 14, 12, 9, 5, 3, 2 years, and (13 months) old.

This case is possibly to be connected with case No. 26. Mother of this case said, "Many children of the neighborhood and a few of her own had measles in July, without the care of a physician."

Many possibly abortive cases in district, which is crowded and unsanitary.

Case No. 51.

A. G., male, four years. French-Canadian. Onset Aug. 7, 1910; paralysis, Aug. 8, 1910. Father a mill hand. Other children, 9, 6, (4), and 1 year old.

This case occurred at extreme end of city. No positive case within ½ mile or more. Very few houses in the immediate neighborhood. One-year-old child sick for two months, beginning one week before onset of present case with diarrhœa and fussiness, but no paralysis. Another six-year-old child in the family was in bed with fever, vomiting and delirium three weeks before onset of present case. Sick a week.

Case No. 52.

T. L., male, twenty-one months. French-Canadian. Onset and paralysis, Aug. 7, 1910. Father a weaver. One other child, four months.

Infected neighborhood. Diarrhœa very common. This case visited a house in the same yard in which case No. 36 occurred on July 22, and near which case No. 46, paralyzed August 2, daily visited.

Case No. 53.

I. R., female, thirteen months. French-Canadian. Onset Aug. 14, 1910; paralysis, Aug. 21, 1910. Father a mill hand. Other children, 7, 6, 4 years, and (13 months) old.

Difficult to obtain important information owing to the long delay before the case was reported, but the case occurred in an infected neighborhood.

Case No. 54.

H. T., male, two years. French-Canadian. Onset, Aug. 15, 1910; paralysis, Aug. 17, 1910. Father a coal teamster. Other children, 6, 4, and (2) years old.

This child was living in Assonet, Mass., when taken ill. Assonet lies at the extreme north end of Fall River. The mother states that she heard of two children in different houses in Assonet ill with infantile paralysis. Names and addresses not known.

No contact directly or indirectly with a known positive case.

Case No. 55.

H. S., male, two and one-half years. American. Onset, Aug. 15, 1910; paralysis, Aug. 17, 1910. Father a loom fixer. Other children, 3½ years, (2½ years), and 7 months old.

This is the last of three cases, probably connected. The other cases are Nos. 10 and 18. The chain of transmission runs probably from No. 10 to No. 18 to No. 55.

Several suspicious (abortive) cases connected with this patient.

Case No. 56.

F. S., male, two and one-half years. English. Onset, Aug. 16, 1910; paralysis, Aug. 23, 1910. Father a loom fixer. Other children, 9, 6, (4½), (2½), and 1½ years old.

This is a family having two cases occurring, one this year, 1910, and one four years ago in a different house. The old case is still wearing a brace, and is now four years and eight months old, having had infantile paralysis when eight months old. Father's brother had one leg everted and shortened since childhood; motion not limited; now over fifty years old; lives in England.

No other positive case in near vicinity, but baby of same family had spell of fever and diarrhœa in July and August.

Case No. 57.

O. P., female, four years. French-Canadian. Onset, Aug. 17, 1910; paralysis, Aug. 21, 1910. Father a carpenter. Other children, 13 and (4) years old.

This case and case No. 6 were the only two cases occurring in the proximity of the water supply of Fall River.

This case occurred in an undeveloped area less than 600 feet from North Watuppa Pond. The family's water supply was obtained directly from the pond by pail. Indirect contact with positive cases Nos. 38 and 29, through means of the children who lived in the same yard with these cases. Case also visited in houses where these cases occurred.

Indirect and possibly direct contact with two preceding cases.

Case No. 58.

E. B., male, seven years eight months. French-Canadian. Father a carpenter. Other children, 24, 21, 19, 17, 15, 13, 11, 9, (7½), and 4 years old.

No known illness in neighborhood and no evident source of contact.

Case No. 59.

L. D., female, six years. French-Canadian. Onset, Aug. 19, 1910; paralysis, Aug. 24, 1910. Father and three older children work in laundry and have much to do with handling dirty clothes. Other children, 17, 16, 14, 12, 9, 7, and (6) years old.

This case lived about 300 yards from cases Nos. 35 and 40. A questionable series of three suspicious illnesses in a family at the end of the same lot of tenements. The children of this family were in contact with patient, even during her illness with tonsilitis, which preceded the paralysis.

Case No. 60.

H. B., male, four years. American. Onset and paralysis, Aug. 20. 1910. Father drives team for yeast company. One other child, 7 years.

This case occurred about 50 yards from cases Nos. 40 and 35. Possible connection by way of healthy persons between this case and that of a child dying of infantile paralysis in Rhode Island more than a month before. A person who had been at the above funeral fondled the patient. Mother and sister had dysentery just previously.

Case No. 61.

J. R., female, twenty-one months. French-Canadian. Onset, Aug. 22, 1910; paralysis, Aug. 24, 1910. Father drives brewery team. One other child, three and one-half months old.

This case came in contact with several children having minor illnesses, and also with a chronic 1908 case. Baby sick with fever, vomiting and diarrhœa in the middle of July.

Case No. 62.

G. P., male, four years four months. French-Canadian. Onset, Aug. 25. 1910; paralysis, Aug. 26, 1910. Father a weaver. Other children, 12, 9, 7, 6, (4), 3, and 2 years old.

Contact with a child, age two, who early in August, 1910, had a three days' illness with fever and staggering gait; walked well at the end of week.

Other suspicious (abortive) cases in family of a neighbor a few days after death of this case.

Case No. 63.

W. M., male, seven months. Portuguese. Onset, Aug. 23, 1910; paralysis doubtful. Father a mill hand. Only child.

Case seen late and data not satisfactory.

Case No. 64.

E. H. B., male, seventeen years. American. Onset, Aug. 30, 1910; paralysis, Sept. 3, 1910. One other child, thirteen years.

This case, the oldest of the series, up to within two weeks of onset lived near cases Nos. 23 and 19, with whose family the patient was acquainted, but no known contact occurred. Case No. 64 on August 28 went to Block Island, R. I., where on August 30 he had his onset. The infection may thus have been acquired either in Fall River or Block Island.

Case No. 65.

R. L., male, eight years. English. Onset, Aug. 30, 1910; paralysis, Sept. 3, 1910. Father a foreman in mill. Other children, 10, (8), 4, and 2 years and 10 months old.

This case lived in neighborhood where cases in the past have occurred. (See case No. 1.)

It is said that in the adjoining house, same yard, a child was ill earlier in the summer. Later, the child could not walk; is now well.

A series of cases from Westport are reported in this connection. Westport lies just across Watuppa Pond, and is in intimate contact with the city of Fall River. The following cases occurred in Westport: —

Case No. 66.

C. D. M., male, 9 years. American. One other child, 7 months old. Onset, July 27, 1910; paralysis, July 4, 1910.

A child from Fall River was ill with vomiting and diarrhœa for a few days about two weeks before the onset of the present case and this child had been at the house where case No. 66 occurred three days before onset.

Three children living across the street from case No. 66, the only near neighbors, all had attacks of vomiting and fever about the middle of July.

Their illnesses lasted only a few days. The ten year old child, however, was sicker than the others and was very weak in his legs so that one day he was found in a heap on the ground.

The father of case No. 66 is a truck gardener and also deals largely in eggs. He has over 700 hens and it is said that some of these hens limp all the time. Such hens are generally killed.

Indefinite illnesses in three neighboring children.

Case No. 67.

E. R., male, two years. English. Onset, June 30, 1910; paralysis, July 1, 1910. Other children, 18, 16, 13, 5, 3, and (2) years old. Father is a milkman delivering milk to Fall River families daily. He collected unclean milk bottles from a large number of customers, which bottles were cleaned by his wife and then returned indiscriminately to customers in Fall River. No definite connection could be made, however, between this milk supply and the disease as occurring in Fall River.

Case No. 68.

G. McC., female, seven years. American. Onset, July 22, 1910; paralysis, July 24, 1910. Only child. Father a fruit pedler.

A cat in the family had been paralyzed in hind legs for two weeks, but child did not handle it.

Case No. 69.

M. A. B., female, four years. American. Onset, July 20, 1910; paralysis, July 23, 1910. Other children, (6 years), (4 years), and 2 months old.

A sister on July 6 complained of being tired, and shortly after had a number of convulsions. July 8 the baby was ill with diarrhœa and vomiting. Diarrhœa said to be prevalent in a boys' camp 1 mile away.

Case No. 70.

L. A. S., female, nine months. American. Onset, Aug. 1, 1910; paralysis, Aug. 5, 1910. Other children, 9 years, 4 years, and (9 months) old.

All the family, except wife and mother, had measles two months ago. A nine-year-old brother was in the habit of carrying written messages to a house in which three cases of indefinite illness and one case of paralysis occurred.

Case No. 71.

E. A. W., male, three years. American.

A child from New Bedford was visiting the mother of patient. This child had had some illness, followed by a staggering gait and also by impairment of speech.

Details concerning this contact lacking.

Case No. 72.

H. T., male, eight years. Irish-American. Father a miller. Other children, 17, 15, 13, 10 (8), 7, and 5 years old.

All the other children had attacks of vomiting, fever and diarrhœa, lasting from two days to two weeks, all occurring since July 4. Patient was in the habit of playing with kittens and pigeons, and three pigeons were found dead within three weeks of the onset of the patient's disease.

Case No. 73.

R. F. K., male, eight years. American. West Road. Onset, Aug. 23, 1910; paralysis, Aug. 28, 1910. Children, 17, 14, 13, and (8) years old.

Patient had measles six weeks before. In fact, all four children had the measles recently.

No points of contact found.

Case No. 74.

A. T., female, six years. American. Onset, Aug. 29, 1910; paralysis, Sept. 1, 1910. Father drives a butcher's cart. Other children, 12, 10, 8, 5, and (6) years old.

Patient had been to Horseneck Beach, a locality associated apparently with other cases of infantile paralysis.

Case No. 75.

S. O. D., Jr., male, three years. American. Onset, Aug. 2, 1910; paralysis, Aug. 5, 1910. Father is a clergyman. Other children, 6 years, (3 years) and 5½ months old.

Family came from Concord to New Bedford on July 18 by train, and thence to Westport by automobile.

A neighboring boy of seven years had a feverish turn, with vomiting, five days later.

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Approved by
The State Board of Publication.

WEEKLY RETURNS OF DEATHS FROM CITIES AND TOWNS OF MORE THAN 10,000 POPULATION.

Week ending Aug. 5, 1911.

CITIES AND TOWNS.	Population. Census for 1910.	Reported Deaths in Each.	Deaths under Five Years.	Deaths from—					
				Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	670,585	193	64	76	12	17	2	1	2
Worcester,	145,986	38	16	11	5	2	1	–	–
Fall River,	119,295	45	22	22	1	5	–	–	–
Lowell,	106,294	40	16	14	–	4	–	–	–
Cambridge,	104,839	24	12	12	3	1	1	–	–
New Bedford,	96,652	39	27	23	5	2	–	–	–
Lynn,	89,336	22	6	2	–	1	–	–	–
Springfield,	88,926	34	20	16	–	3	1	1	–
Lawrence,	85,892	22	13	10	1	1	–	–	–
Somerville,	77,236	9	4	1	–	–	1	–	–
Holyoke,	57,730	26	19	4	2	2	–	–	–
Brockton,	56,878	14	7	3	–	–	–	–	–
Malden,	44,404	9	5	–	–	–	–	–	–
Haverhill,	44,115	16	6	7	1	2	–	–	–
Salem,	43,697	21	11	–	–	–	–	–	–
Newton,	39,806	4	2	1	1	–	–	–	–
Fitchburg,	37,826	3	2	1	1	–	–	–	–
Taunton,	34,259	13	7	8	1	–	–	–	–
Everett,	33,484	8	2	–	–	–	–	–	–
Quincy,	32,642	8	1	1	1	–	–	–	–
Chelsea,	32,452	13	4	4	–	2	–	1	–
Pittsfield,	32,121	16	7	1	–	1	–	–	–
Waltham,	27,834	2	1	1	–	–	–	–	–
Brookline,	27,792	7	1	1	1	–	–	–	–
Chicopee,	25,401	11	6	6	–	–	–	–	–
Gloucester,	24,398	12	7	2	–	–	–	–	–
Medford,	23,150	4	–	1	–	1	–	–	–
North Adams,	22,019	5	2	4	–	1	–	–	–
Northampton,	19,431	6	1	2	1	–	–	–	–
Beverly,	18,650	5	1	–	–	–	–	–	–
Revere,	18,219	3	1	1	–	–	–	–	–
Leominster,	17,580	4	2	–	–	–	–	–	–
Attleborough,	16,215	2	1	1	–	–	–	–	–
Westfield,	16,044	6	3	1	–	1	–	–	–
Peabody,	15,721	–	–	–	–	–	–	–	–
Melrose,	15,715	4	1	1	–	–	–	–	–
Hyde Park,	15,507	4	3	1	–	–	–	–	–
Woburn,	15,308	5	2	1	–	–	–	–	–
Newburyport,	14,949	3	2	–	–	–	–	–	–
Gardner,	14,699	5	1	1	–	–	–	–	–
Marlborough,	14,579	3	0	2	–	1	–	–	–
Clinton,	13,075	6	–	1	1	–	–	–	–
Milford,	13,055	7	0	1	–	1	–	–	–
Adams,	13,026	6	1	6	–	–	–	–	–
Framingham,	12,948	3	0	1	–	–	–	1	–
Weymouth,	12,895	–	–	–	–	–	–	–	–
Watertown,	12,875	3	0	1	–	1	–	–	–
Southbridge,	12,592	3	2	3	1	–	–	–	–
Plymouth,	12,141	–	–	–	–	–	–	–	–
Webster,	11,509	1	1	–	–	–	–	–	–
Methuen,	11,448	5	4	1	–	–	–	–	–
Wakefield,	11,404	2	1	1	1	–	–	–	–
Arlington,	11,187	0	–	–	–	–	–	–	–
Greenfield,	10,427	4	1	1	–	–	–	–	–
Winthrop,	10,132	2	–	–	–	–	–	–	–
Recapitulation.									
Total of reporting towns,	2,565,623	750	318	259	39	49	6	4	2

WEEK ENDING AUG. 12, 1911.

CITIES AND TOWNS.	Population. Census for 1910.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM— Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	670,585	216	75	88	8	18	–	–	1
Worcester,	145,986	37	16	11	1	3	1	–	–
Fall River,	119,295	55	33	37	6	3	1	–	–
Lowell,	106,294	45	22	14	4	4	–	–	–
Cambridge,	104,839	31	17	19	5	4	2	–	–
New Bedford,	96,652	36	19	14	2	2	–	1	–
Lynn,	89,336	23	10	2	1	–	–	–	–
Springfield,	88,926	28	5	6	1	1	–	–	–
Lawrence,	85,892	39	18	20	4	3	–	–	–
Somerville,	77,236	15	7	3	1	2	–	–	–
Holyoke,	57,730	25	15	6	2	2	–	–	2
Brockton,	56,878	13	4	3	1	–	–	–	–
Malden,	44,404	6	3	1	–	1	–	–	–
Haverhill,	44,115	15	4	3	–	1	–	–	–
Salem,	43,697	14	5	1	1	–	–	–	–
Newton,	39,806	12	1	4	1	3	–	–	–
Fitchburg,	37,826	10	3	–	–	–	–	–	–
Taunton,	34,259	14	6	7	–	–	–	–	–
Everett,	33,484	4	2	2	–	1	–	–	–
Quincy,	32,642	6	3	1	1	–	–	–	–
Chelsea,	32,452	8	3	2	1	1	–	–	–
Pittsfield,	32,121	5	5	1	1	–	–	–	–
Waltham,	27,834	10	3	–	–	–	–	–	–
Brookline,	27,792	4	1	1	–	–	–	–	–
Chicopee,	25,401	10	8	8	1	–	–	–	–
Gloucester,	24,398	12	3	1	–	1	–	–	–
Medford,	23,150	4	1	–	–	–	–	–	–
North Adams,	22,019	9	5	4	1	1	–	–	–
Northampton,	19,431	5	1	1	–	–	–	–	–
Beverly,	18,650	6	1	1	–	1	–	–	–
Revere,	18,219	6	2	1	–	–	1	–	–
Leominster,	17,580	7	2	–	–	–	–	–	–
Attleborough,	16,215	3	2	1	–	–	–	–	–
Westfield,	16,044	7	5	2	–	1	–	–	–
Peabody,	15,721	–	–	–	–	–	–	–	–
Melrose,	15,715	0	–	–	–	–	–	–	–
Hyde Park,	15,507	4	–	1	–	–	–	–	–
Woburn,	15,308	5	1	1	–	–	–	1	–
Newburyport,	14,949	3	2	1	–	–	–	–	–
Gardner,	14,699	4	1	2	–	–	–	–	–
Marlborough,	14,579	7	3	5	1	1	–	–	–
Clinton,	13,075	4	2	2	1	–	1	–	–
Milford,	13,055	3	1	1	–	–	–	1	–
Adams,	13,026	1	0	2	–	–	–	1	–
Framingham,	12,948	4	1	1	1	–	–	–	–
Weymouth,	12,895	–	–	–	–	–	–	–	–
Watertown,	12,875	6	2	–	–	–	–	–	–
Southbridge,	12,592	3	2	1	–	–	–	–	–
Plymouth,	12,141	–	–	–	–	–	–	–	–
Webster,	11,509	5	4	–	–	–	–	–	–
Methuen,	11,448	1	–	1	–	1	–	–	–
Wakefield,	11,404	1	1	1	–	–	–	–	–
Arlington,	11,187	6	2	3	1	–	–	–	–
Greenfield,	10,427	5	2	2	–	–	–	–	–
Winthrop,	10,132	4	–	–	–	–	–	–	–

Recapitulation.

Total of reporting towns,	2,565,623	806	334	289	47	55	6	4	3

WEEK ENDING AUG. 19, 1911.

CITIES AND TOWNS.	Population. Census for 1910.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM—					
				Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	670,585	204	90	90	17	16	1	1	1
Worcester,	145,986	38	14	16	3	3	–	1	–
Fall River,	119,295	51	27	33	1	7	1	–	1
Lowell,	106,294	40	17	20	4	3	–	1	–
Cambridge,	104,839	20	8	12	1	3	–	–	–
New Bedford,	96,652	37	21	22	3	4	–	–	–
Lynn,	89,336	31	9	5	2	1	–	1	–
Springfield,	88,926	31	10	8	3	–	–	1	–
Lawrence,	85,892	29	19	18	–	1	–	–	–
Somerville,	77,236	21	8	6	1	3	–	1	–
Holyoke,	57,730	14	6	1	–	–	–	–	–
Brockton,	56,878	5	0	–	–	–	–	–	–
Malden,	44,404	8	1	–	–	–	–	–	–
Haverhill,	44,115	15	3	1	1	–	–	–	–
Salem,	43,697	14	9	3	–	1	–	–	–
Newton,	39,806	8	5	3	1	–	–	–	–
Fitchburg,	37,826	8	4	1	–	–	1	–	–
Taunton,	34,259	22	13	15	1	–	–	–	–
Everett,	33,484	8	3	1	–	–	–	–	–
Quincy,	32,642	7	5	3	1	2	–	–	–
Chelsea,	32,452	12	2	2	1	1	–	–	–
Pittsfield,	32,121	11	5	4	–	–	–	–	–
Waltham,	27,834	11	6	–	–	–	–	–	–
Brookline,	27,792	3	3	–	–	–	–	–	–
Chicopee,	25,401	21	16	11	–	–	–	–	–
Gloucester,	24,398	3	2	–	–	–	–	–	–
Medford,	23,150	5	1	1	–	1	–	–	–
North Adams,	22,019	6	3	2	–	–	–	–	–
Northampton,	19,431	3	2	2	–	–	–	–	–
Beverly,	18,650	8	2	1	–	–	–	–	–
Revere,	18,219	6	3	3	–	–	–	–	–
Leominster,	17,580	5	1	1	–	1	–	–	–
Attleborough,	16,215	2	2	–	–	–	–	–	–
Westfield,	16,044	5	–	3	–	3	–	–	–
Peabody,	15,721	–	–	–	–	–	–	–	–
Melrose,	15,715	4	1	1	–	–	–	–	–
Hyde Park,	15,507	3	1	1	–	–	–	–	–
Woburn,	15,308	3	0	1	–	–	–	–	–
Newburyport,	14,949	4	2	3	1	1	–	–	–
Gardner,	14,699	1	1	1	–	–	–	–	–
Marlborough,	14,579	3	1	1	–	1	–	–	–
Clinton,	13,075	2	1	–	–	–	–	–	–
Milford,	13,055	2	0	1	–	–	–	–	–
Adams,	13,026	2	1	–	–	–	–	–	–
Framingham,	12,948	4	1	1	–	1	–	–	–
Weymouth,	12,895	–	–	–	–	–	–	–	–
Watertown,	12,875	1	0	–	–	–	–	–	–
Southbridge,	12,592	4	3	2	–	–	–	–	–
Plymouth,	12,141	–	–	–	–	–	–	–	–
Webster,	11,509	2	0	2	–	2	–	–	–
Methuen,	11,448	2	1	–	–	–	–	–	–
Wakefield,	11,404	5	4	–	–	–	–	–	–
Arlington,	11,187	0	–	–	–	–	–	–	–
Greenfield,	10,427	5	3	3	1	–	–	–	–
Winthrop,	10,132	1	–	–	–	–	–	–	–

Recapitulation.

Total of reporting towns,	2,565,623	760	340	305	42	55	3	6	2

WEEK ENDING AUG. 26, 1911.

CITIES AND TOWNS.	Population. Census for 1910.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM— Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	670,585	205	84	92	15	13	1	1	1
Worcester,	145,986	32	13	9	1	1	2	–	–
Fall River,	119,295	41	25	30	1	2	–	–	1
Lowell,	106,294	25	10	9	–	3	–	–	–
Cambridge,	104,839	20	7	10	2	3	–	–	–
New Bedford,	96,652	48	27	22	1	–	–	1	–
Lynn,	89,336	17	12	4	1	–	–	–	–
Springfield,	88,926	24	10	7	1	1	–	–	–
Lawrence,	85,892	34	18	16	–	2	–	–	–
Somerville,	77,236	13	4	1	–	1	–	–	–
Holyoke,	57,730	19	11	3	1	1	1	–	–
Brockton,	56,878	11	5	6	1	1	–	–	–
Malden,	44,404	8	2	1	1	–	–	–	–
Haverhill,	44,115	8	–	2	1	1	–	–	–
Salem,	43,697	21	13	2	–	1	1	–	–
Newton,	39,806	8	3	1	1	–	–	–	–
Fitchburg,	37,826	8	4	3	1	2	–	–	–
Taunton,	34,259	16	6	7	–	–	1	–	–
Everett,	33,484	5	3	1	–	1	–	–	–
Quincy,	32,642	11	7	4	2	–	–	–	–
Chelsea,	32,452	10	2	1	1	–	–	–	–
Pittsfield,	32,121	12	4	5	–	–	–	1	–
Waltham,	27,834	7	1	3	1	1	–	–	–
Brookline,	27,792	4	–	–	–	–	–	–	–
Chicopee,	25,401	12	10	9	–	1	–	–	–
Gloucester,	24,398	9	2	–	–	–	–	–	–
Medford,	23,150	4	1	1	1	–	–	–	–
North Adams,	22,019	7	4	4	1	–	–	–	–
Northampton,	19,431	12	4	5	–	–	1	1	–
Beverly,	18,650	8	2	3	–	1	–	1	–
Revere,	18,219	1	1	–	–	–	–	–	–
Leominster,	17,580	3	–	–	–	–	–	–	–
Attleborough,	16,215	5	4	2	–	–	–	–	–
Westfield,	16,044	4	–	3	1	2	–	–	–
Peabody,	15,721	–	–	–	–	–	–	–	–
Melrose,	15,715	6	1	1	–	–	–	–	–
Hyde Park,	15,507	4	3	1	–	–	–	–	–
Woburn,	15,308	7	0	3	–	–	–	–	–
Newburyport,	14,949	4	–	–	–	–	–	–	–
Gardner,	14,699	1	1	1	–	–	–	–	–
Marlborough,	14,579	5	1	–	–	–	–	–	–
Clinton,	13,075	4	1	–	–	–	–	–	–
Milford,	13,055	1	1	–	–	–	–	–	–
Adams,	13,026	2	1	3	–	–	–	–	–
Framingham,	12,948	0	–	–	–	–	–	–	–
Weymouth,	12,895	–	–	–	–	–	–	–	–
Watertown,	12,875	1	0	–	–	–	–	–	–
Southbridge,	12,592	3	2	1	–	–	–	–	–
Plymouth,	12,141	–	–	–	–	–	–	–	–
Webster,	11,509	3	2	–	–	–	–	–	–
Methuen,	11,448	7	1	–	–	–	–	–	–
Wakefield,	11,404	4	1	–	–	–	–	–	–
Arlington,	11,187	0	–	–	–	–	–	–	–
Greenfield,	10,427	7	3	4	–	1	–	–	–
Winthrop,	10,132	3	–	–	–	–	–	–	–
Recapitulation.									
Total of reporting towns,	2,565,623	734	317	280	35	39	7	5	2

WEEKLY RETURNS OF DEATHS FROM CERTAIN INFECTIOUS DISEASES.

Deaths from Infectious Diseases not specifically mentioned in above Tables during the Weeks of Aug. 5, 12, 19 and 26, 1911.

Disease.	Place.	Week ending —			
		Aug. 5.	Aug. 12.	Aug. 19.	Aug. 26.
Cerebro-spinal meningitis,	Boston,	2	2	–	2
	Chelsea,	1	–	–	–
	Everett,	–	–	1	–
	Gloucester,	1	–	–	–
	Lowell,	–	–	1	–
	New Bedford,	1	–	–	–
	North Adams,	1	–	–	–
	Worcester,	–	–	–	1
Scarlet fever,	Boston,	2	1	–	–
	Chicopee,	1	–	–	–
	Fall River,	–	–	1	–
	Lawrence,	–	1	–	–
	Quincy,	–	–	–	1
Whooping cough,	Attleborough,	1	1	–	–
	Boston,	1	1	–	5
	Cambridge,	–	1	2	–
	Fall River,	–	1	1	2
	Haverhill,	1	–	–	–
	Hyde Park,	–	1	–	1
	Lawrence,	–	–	2	1
	Lowell,	1	–	–	–
	Lynn,	–	–	1	1
	Milford,	–	–	1	–
	Springfield,	1	–	–	1
	Taunton,	–	–	1	–
Erysipelas,	Boston,	–	2	–	–
	Fall River,	1	–	–	–
	Worcester,	–	–	1	–
Tuberculosis other than pulmonary.	Adams,	–	–	–	1
	Arlington,	–	1	–	–
	Beverly,	–	–	1	1
	Boston,	1	1	7	1
	Cambridge,	2	–	–	–
	Fall River,	1	–	1	1
	Holyoke,	–	–	1	–
	Lawrence,	–	2	–	2
	Lowell,	2	–	1	–
	Lynn,	–	1	–	–
	Marlborough,	1	–	–	–
	Methuen,	1	–	–	–
	New Bedford,	1	–	1	–

DEATHS FROM INFECTIOUS DISEASES, ETC. — *Concluded.*

DISEASE.	Place.	WEEK ENDING —			
		Aug. 5.	Aug. 12.	Aug. 19.	Aug. 26.
Tuberculosis other than pulmonary.	North Adams,	1	–	1	–
	Quincy,	–	–	–	1
	Salem,	–	–	2	–
	Somerville,	–	–	1	–
	Springfield,	–	–	1	–
	Woburn,	–	–	–	2
	Worcester,	–	1	2	1
Anterior poliomyelitis,	Boston,	–	–	–	1
	Westfield,	–	1	–	–
	Woburn,	–	–	1	1
Meningitis other than cerebro-spinal.	Arlington,	–	1	–	–
	Wakefield,	–	1	–	–
Tetanus,	Marlborough,	–	1	–	–
	Lowell,	–	–	1	–
Pellagra,	Northampton,	1	–	–	–

WEEKLY RETURNS OF CASES OF INFECTIOUS DISEASES.

Cases of Infectious Diseases reported during the Weeks of August 5, 12, 19 and 26, 1911.

[Under the provisions of section 52 of chapter 75 of the Revised Laws.]

	Week ending —				
	Aug. 5.	Aug. 12.	Aug. 19.	Aug. 26.	Total.
Diphtheria,	78	64	88	82	312
Measles,	76	56	58	46	236
Scarlet fever,	51	41	46	52	190
Typhoid fever,	63	69	82	77	291
Tuberculosis, pulmonary,	131	121	142	101	495
Tuberculosis other than pulmonary,	1	1	3	–	5
Cerebro-spinal meningitis,	4	1	2	4	11
Meningitis other than cerebro-spinal,	1	1	2	–	4
Whooping cough,	81	42	68	51	242
Varicella,	8	16	3	7	34
Erysipelas,[1]	–	–	–	1	1
Mumps,[1]	–	–	1	1	2
Ophthalmia neonatorum,	6	28	59	25	118
Anterior poliomyelitis,	11	8	15	19	53
Malaria,	1	–	1	1	3
Tetanus,	4	–	2	–	6

[1] Erysipelas and mumps are not diseases notifiable under section 52 of chapter 75 of the Revised Laws. The figures concerning these diseases are, therefore, incomplete.

MONTHLY REPORT ON INSPECTION OF FOOD AND DRUGS.

The following summary presents the results of the examination of food and drugs made by the State Board of Health during the month of August, 1911:—

Articles examined.	Number found to be of Good Quality.	Number adulterated or varying from the Legal Standard.	Total.	Articles examined.	Number found to be of Good Quality.	Number adulterated or varying from the Legal Standard.	Total.
Baking powder,	2	–	2	Lard,	–	1	1
Butter,	3	–	3	Milk,	314	131	445
Cider,	1	–	1	Molasses,	2	–	2
Cocoa,	2	1	3	Olive oil,	9	1	10
Condensed milk,	3	–	3	Peanut butter,	1	–	1
Cream,	15	1	16	Pickles,	6	–	6
Cream of tartar,	1	–	1	Salad dressing,	2	–	2
Drugs,	52	7	59	Sausages,	3	4	7
Eggs,	–	7	7	Spices,	3	–	3
Flavoring extracts,	19	1	20	Vinegar,	8	1	9
Grape juice,	1	–	1	Total,	450	155	605
Jams and jellies,	3	–	3				

The samples of drugs found to be adulterated were alcohol and spirits of peppermint.

The cities and towns in which samples were collected were: Boston, Brookline, Brockton, Burlington, Cambridge, Concord, Dartmouth, Edgartown, Fairhaven, Fall River, Falmouth, Fitchburg, Halifax, Haverhill, Hopedale, Hudson, Hull, Lawrence, Lynn, Malden, Maynard, Medfield, New Bedford, Northbridge, Oak Bluffs, Provincetown, Randolph, Saugus, Somerville, South Framingham, Stoneham, Taunton and Woburn.

PROSECUTIONS FOR VIOLATIONS OF THE LAW RELATING TO FOOD AND DRUGS.

Eleven convictions were secured during the month of August, 1911, for selling adulterated food and drugs, as follows: —

No.	Name of Defendant.	Place.	Character of Article sold.
1	John Baben,	Hudson,	Milk (total solids, 11.58).[1]
2	Joseph M. Barboga,	New Bedford,	Milk (total solids, 9.20).[2 4]
3	Richard Dugdale,	Fairhaven,	Milk (total solids, 10.66).[2]
4	William T. Hanscom,	Bolton,	Milk (total solids, 11.30).[2 4]
5	Virgin P. Medeiros,	New Bedford,	Milk (total solids, 9.40).[2]
6	Edward E. Nichols,	Malden,	Milk (total solids, 11.70).
7	James Russo,	Maynard,	Milk (total solids, 10.28).[1]
8	James Russo,	Maynard,	Milk (total solids, 10.10).[2]
9	Andrew Szala,	New Bedford,	Milk (total solids, 10.13).[2]
10	Abraham Gunsenhiser,	Boston,	Pork Sausage.[3 4]
11	Samuel Karp,	Boston,	Wood alcohol (not properly labeled).

[1] Skimmed. [2] Watered. [3] Contained Cereal. [4] Appealed.

Fines imposed, $575.

LIST OF ADULTERATED OR IMPROPERLY LABELED FOODS, ETC., FOR AUGUST, 1911.

Number of Sample.	Character of Sample.	Name of Manufacturer, Wholesaler or Producer.	Results of Analyses.
9214 N	Spirit of peppermint,	Chas. A. Nelson, Haverhill Mass,	44 per cent.; U. S. P. strength.
9218 N	Spirit of peppermint,	N. C. Tozier & Co., Haverhill, Mass.,	67 per cent.; U. S. P. strength.
9258 N	Spirit of peppermint,	Ralph B. Quinland, Boston, Mass.,	71.5 per cent.; U. S. P. strength.
9294 N	Spirit of peppermint,	S. A. Epstein, Boston, Mass.,	71.3 per cent.; U. S. P. strength.
15196	Milk,	Joseph H. Gregory, Raynham, Mass.,	Total solids, 11.14 per cent.; fat, 3.60 per cent.; contained added water.
15210	Milk,	Richard Dugdale, Holcomb Farm, Fairhaven, Mass.,	Total solids, 10.66 per cent.; fat, 3.10 per cent.; contained added water.
15211			Total solids, 11.06 per cent.; fat, 3.40 per cent.; contained added water.
15212			Total solids, 11.22 per cent.; fat, 3.40 per cent.; contained added water.
15213			Total solids, 11.26 per cent.; fat, 3.55 per cent.; contained added water.
15214			Total solids, 11.26 per cent.; fat, 3.60 per cent.; contained added water.
15292	Milk,	Paul Hoffman, Taunton, Mass.,	Total solids, 11.72 per cent.; fat, 3.95 per cent.; contained added water.
q 7542	Milk,	Morris Finkel, Lynn, Mass.,	Total solids, 11.28 per cent.; fat, 3.50 per cent.; contained added water.
q 7543			Total solids, 11.28 per cent.; fat, 3.50 per cent.; contained added water.
8365 R	Milk,	G. Edward Winn, Burlington, Mass.,	Total solids, 11.04 per cent.; fat, 3.50 per cent.; contained added water.
8383 R	Milk,	Joseph Steele, Provincetown, Mass.,	Total solids, 11.84 per cent.; fat, 3.90 per cent.; contained added water.
8385 R			Total solids, 12.62 per cent.; fat, 4.80 per cent.; contained added water.
8391 R	Milk,	Lemuel F. Nickerson, Provincetown, Mass., Charles Nickerson, Provincetown, Mass.,	Total solids, 11.64 per cent.; fat, 3.90 per cent.; contained added water.
q 7467	Cream,	Harry W. Litchfield, Somerville, Mass., Patrick O'Leary, Somerville, Mass.,	Fat, 11.00 per cent.; below the cream standard.

INSPECTION OF DAIRIES.

During the month of August, 1911, 161 dairies were examined in the following places:—

Place.	Number examined.	Number found to present no Objectionable Features.	Per Cent.	Number concerning which Letters were sent.	Per Cent.
Acushnet,	18	13	72.22	5	27.78
Second inspection,	28	22	78.57	6	21.43
Brockton,	2	1	50.00	1	50.00
Second inspection,	30	21	70.00	9	30.00
Chelsea,	4	4	100.00	–	–
Second inspection,	9	6	66.67	3	33.33
Third inspection,	10	6	60.00	4	40.00
Fairhaven,	12	7	58.33	5	41.67
Second inspection,	32	15	46.88	17	53.12
Freetown,	5	3	60.00	2	40.00
Second inspection,	6	2	33.33	4	66.67
Marion,	–	–	–	–	–
Second inspection.	5	5	100.00	–	–

Total number of dairies examined,	161
Number found to be free from objectionable conditions,	105
Number concerning which letters were sent,	56
Total number of conditions to which attention was called,	143
Percentage of dairies which passed inspection,	65.22

In addition to the above, 94 dairies were visited at which the sale of milk had been discontinued.

The names of the owners of the dairies found to be worthy of commendation follow:—

Acushnet.

Class A.

White, W. A.* †

Class B.

Bradford Bros.* †
Brownell, Joseph T.*
Burt, Joseph*
Chase, Mrs. J. E.*
Dillingham, A. L.*
Ellis, N. B.*
Gracie, Mrs. J. P.*
Greenwood, Joseph
Hammett, John F.* †
Hathaway, James H.*
Hebert, Benjamin
Howland, Frank T.*
Jenney, Albert*
Jennings, Alfred
Maderis, Manuel
Marion, Joseph*
Noia, Frank P.*
Parker, George T.*
Parker, Robert*
Perry, Charles J.*
Robinson, T. J.* †
Schokley, William I.
Sears, Joseph
Sherman, H. T.
Smith, John
Smith, William
Terrian, Joseph
Tripp, Fred O.*
Tripp, Jerome P.*
Tripp, Walter
Varley, Robert*
Weeks, Nathan H.*
White, Augustus*
Woolfenden, Robert

* Second inspection. † Reported favorably on first inspection.

Brockton.

Class A.

Field, D. W.* †
Field, F. F.* †
Packard, J. Q.* †
Southworth, M. C.* †

Class B.

Battles, N. O.* †
Brockton City Farm *
Butler, A. W.* †
Campbell, Oscar A.
Copeland, Ellis *
Cross, W. B.* †
Emery Bros.* †
Foster, G. H.* †
Hewett, Justin * †
Holmes, William *
Howard, Franklin *
Howard, Estate of Warren A.* †
Kingman, A. P.*
Keith, E. E.* †
Packard, W. H.* †
Rankin Bros.* †
Sylvester, W. H.* †
Tabor, Henry *

Chelsea.

Class B.

Cassidy, Mrs. Kate R. A.‡
Goldstein, Harris
Hancock, T. G.* †
Levenson, Morris ‡
Miller, Jacob
Mills, E. E.‡ ¶
Rubin, M.‡
Schlomovitz, Mrs. Ida ‡
Shaffer, Harry
Shalek, Joseph ‡
Shapiro, Jacob *
Shulman, Zalman *
Siggins, Clifford * †
Smith, Charles * †
Weiss & Soroko
Zecha, F.*

Fairhaven.

Class A.

Blossom, L. F.* †
Dana, Mrs. E. A.* †

Class B.

Akin, D. D.*
Alfreds, Enos
Costa, Ernest
Delanow, Ephraim
Dugdale, Richard
Flemming, Archibald
Hiller, George
Howard, Charles F.*
Kendrick, Daniel W.*
Lopes, A. S.*
Manghan, Joseph.*
Morse, John P.* †
Paulino, Frank X.*
Peirce, Henry C.* †
Rivard, J.*
Rose, Antone*
St. Amand, Henry*
Schroeder, Wm. H.
Stevens, Nelson H.*
Studley, B. G.*

Freetown.

Class B.

Braley, Charles
Krause, Otto
Levaro, Joseph*
Lucas, Alden B.
Mastera, Frank, Jr.

Marion.

Class B.

Dexter, Seth L.* †
Hiller Bros.* †
Lucc, Roland L.* †
Richards, George F.* †
Vose, B. F.*

---

* Second inspection. † Reported favorably on first inspection.
‡ Third inspection. ¶ Reported favorably on second inspection.

THE CHOLERA SITUATION.[1]

Cholera has been officially reported present at Belgrade, Servia, and Fiume, Austria. Trieste, Austria, has been officially declared free from the disease.

On Sept. 7, 1911, in response to a request made by the Treasury Department, the Department of State cabled instructions to the American consul general at Marseille to detain for five days prior to departure, with enforcement of paragraphs 29, 31 and 32 of the Quarantine Regulations of 1910, all steerage passengers originating in Marseille or in other places in which the infection of cholera exists.

No case of cholera or cholera carrier has arrived at a port of the United States since those reported as arriving at New York quarantine August 18 on the steamship "Re d' Italia," from Genoa, Naples and Palermo.

The results of the quarantine regulation promulgated by the Secretary of the Treasury July 19, requiring the bacteriological examination of all steerage passengers arriving at ports of the United States from places infected with cholera, to determine the presence of cholera bacillus carriers before being admitted to entry, are shown in the number of cholera carriers detected at the New York quarantine station. From the time these examinations was begun to September 5, 26 carriers were found at the New York quarantine among detained passengers and members of crews. They were kept under supervision for periods varying from eight to thirty-six days, and until repeated bacteriological examinations showed that the individuals had ceased to be carriers.

A TRIUMPH OF PREVENTIVE MEDICINE.

In spite of the human tendency to forget what is disagreeable, most of our readers will recall the surprise and mortification with which the American people confronted the devastating epidemics which swept through the camps of the troops mobilized at the time of the Spanish war, thirteen years ago. It has been, therefore, most agreeable to read the highly favorable health reports which have come from time to time from our troops in Texas, and which have been brought to the atten-

[1] From Public Health Reports of the Public Health and Marine Hospital Service, Sept. 15, 1911.

tion of the medical profession by the President of the United States in words of hearty commendation.

Now that the maneuver division has been abolished by the return of most of its constituent organizations to their stations, it is of interest to be informed from an authoritative source what were the methods of procedure by which the new knowledge of preventive medicine has been applied to camp sanitation, and to have an exact and official statement of the results accomplished. It is impossible to read Colonel Kean's article, published in another column of this issue,[1] and especially the remarkable comparative figures at its end (see tables), without realizing that an epoch-making achievement in preventive medicine has been accomplished by the army medical corps.

1898.

Table showing for the Regiments of the Second Division of the Seventh Army Corps, assembled at Jacksonville, Fla., the Mortality and Morbidity from Typhoid Fever.

Regiments.	Mean Strength.	Cases of Typhoid Fever.		Deaths from Typhoid Fever.	Deaths from All Diseases.
		Certain.	Certain and Probable.		
Second Illinois,	1,095	253	341	18	22
First North Carolina,	1,164	147	227	16	20
Second New Jersey,	1,153	185	318	29	32
First Wisconsin,	1,232	209	311	46	48
Fiftieth Iowa,	1,097	164	253	33	33
Ninth Illinois,	1,288	153	248	18	28
Second Virginia,	1,220	105	152	17	20
Fourth Virginia,	1,274	135	231	21	28
Forty-ninth Iowa,	1,236	378	612	50	50
Total,	10,759	1,729	2,693	248	281

[1] Editorial in "Journal of American Medical Association," Aug. 26, 1911.

1911.

Table showing for the Organizations composing the Maneuver Division at San Antonio, Tex., the Morbidity and Mortality from Typhoid Fever, March 10 to July 10, 1911.[1]

Organization.	Mean Strength, June.	Cases of Typhoid, Certain and Probable.	Deaths from Typhoid Fever.	Deaths from All Diseases.
Eleventh Infantry,	924	–	–	–
Fifteenth Infantry,	969	–	–	2
Eighteenth Infantry,	1,022	–	–	–
Thirteenth Infantry,	929	–	–	–
Twenty-second Infantry,	1,033	–	–	–
Tenth Infantry,	1,016	–	–	1
Seventeenth Infantry,	954	–	–	–
Twenty-eighth Infantry,	951	–	–	–
Third Field Artillery,	847	–	–	2
Fourth Field Artillery,	741	–	–	1
Engineer Battalion,	536	–	–	1
Signal Corps,	197	–	–	–
Ninth Cavalry,	744	–	–	–
Eleventh Cavalry,	1,143	–	–	3
Sanitary troops,	795	1[2]	–	1
Total,	12,801	1	–	11

[1] In addition to the above a civilian teamster, not immunized, was admitted for typhoid fever in April.

[2] This patient, a private of the hospital corps, had not completed his immunization, having taken only two doses. The case was very mild and would perhaps have been overlooked but for the rule that blood cultures were made in all cases of fever of over forty-eight hours' duration. The Widal reaction has no diagnostic value in immunized persons, as all respond to it. Forty-nine cases of typhoid fever with 19 deaths were reported as occurring in the city of San Antonio during this period.

For purpose of comparison with the maneuver division a table is given showing the typhoid record of a division of volunteer troops camped at Jacksoville, Fla., in 1898 under conditions similar to those at San Antonio this summer. But the difference is amazing. The division of 1898 has 2,693 cases with 248 deaths, which was about the average typhoid incidence of the camps of the Spanish war, while the division of 1911 had 1 case and no death. The deaths from all diseases were 281 for the former and 11 for the latter.

At the beginning of the Spanish war it was an accepted belief on the part of the medical profession that typhoid epidemics were due to polluted water supplies, and that with pure water this disease was not to be feared, but the experience of that war demonstrated that the question was not so simple, and that contact infection, flies and other factors had to be considered. These other factors have been studied with much care in recent years and it has been found that they can be, to a large extent, but not entirely, removed by scrupulous attention to the cleanliness of the camp and the details of personal hygiene among the men.

While the disposal of fecal matters and other wastes seems to have been carried out in this camp with admirable thoroughness of execution and simplicity of method, no new sanitary principle was evoked, and we must look further for the explanation of the enormous discrepancy between the amount of typhoid fever in the Second Division, Seventh Army Corps, thirteen years ago, and the single case in the maneuver division.

It is clear that the medical officers attribute their triumph over typhoid fever to the method of immunization by the injection of dead cultures of the typhoid bacillus, which was introduced into the army two years ago as a voluntary measure, and was for the first time made compulsory when applied to the officers and men of this division. The value of this preventive measure, as well as its innocuousness, has thus been demonstrated conclusively and on a great scale. It would seem, therefore, that the time has come for the medical profession throughout the country to follow the example of the army by making use of the typhoid prophylaxis in general practice. The high degree of efficiency shown by the medical service in the recent mobilization is not fortuitous, but is the fruit of patient, laborious and ably directed efforts to apply the lessons of the Spanish war, and to assure the best results. This efficiency is a legitimate source of pride and satisfaction to the medical profession of the country, and should be a sufficient demonstration to the government of the wisdom of adequate and generous provision for its sanitary service. It is regrettable to read of shortages of officers, of men and of mules for the sanitary organizations when only a single division is mobilized.

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Approved by
The State Board of Publication.

WEEKLY RETURNS OF DEATHS FROM CITIES AND TOWNS OF MORE THAN 10,000 POPULATION.

WEEK ENDING SEPT. 2, 1911.

CITIES AND TOWNS.	Population. Census for 1910.	Reported Deaths in Week.	Deaths under Five Years.	DEATHS FROM—					
				Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diphtheria.	Typhoid Fever	Measles.
Boston,	670,585	204	60	76	12	14	–	3	–
Worcester,	145,986	40	14	5	3	–	2	–	–
Fall River,	119,295	42	27	28	2	2	1	2	–
Lowell,	106,294	33	13	7	4	2	–	–	–
Cambridge,	104,839	25	8	10	1	4	1	–	–
New Bedford,	96,652	43	26	25	2	2	–	–	–
Lynn,	89,336	22	5	4	1	3	–	–	–
Springfield,	88,926	21	5	11	2	1	–	–	–
Lawrence,	85,892	25	14	14	3	3	–	–	–
Somerville,	77,236	10	2	–	–	–	–	–	–
Holyoke,	57,730	21	13	4	2	2	–	–	–
Brockton,	56,878	11	5	6	–	–	–	–	–
Malden,	44,404	5	–	–	–	–	–	–	–
Haverhill,	44,115	6	2	1	–	–	–	–	–
Salem,	43,697	10	8	–	–	–	–	–	–
Newton,	39,806	3	1	–	–	–	–	–	–
Fitchburg,	37,826	10	5	1	–	–	–	–	–
Taunton,	34,259	13	6	6	–	–	–	–	–
Everett,	33,484	4	1	2	–	–	–	–	–
Quincy,	32,642	15	6	4	–	2	–	–	–
Chelsea,	32,452	4	1	–	–	–	–	–	–
Pittsfield,	32,121	13	4	7	–	3	–	–	–
Waltham,	27,834	9	3	3	–	2	–	–	–
Brookline,	27,792	2	2	2	1	–	–	–	–
Chicopee,	25,401	6	4	4	1	1	–	–	–
Gloucester,	24,398	8	2	1	–	–	–	–	–
Medford,	23,150	3	–	1	1	–	–	–	–
North Adams,	22,019	3	–	2	–	–	–	–	–
Northampton,	19,431	4	3	3	–	–	–	–	–
Beverly,	18,650	8	3	1	–	1	–	–	–
Revere,	18,219	2	1	–	–	–	–	–	–
Leominster,	17,580	2	–	–	–	–	–	–	–
Attleborough,	16,215	3	1	1	–	–	–	–	–
Westfield,	16,044	5	3	1	–	1	–	–	–
Peabody,	15,721	–	–	–	–	–	–	–	–
Melrose,	15,715	5	2	1	–	–	–	–	–
Hyde Park,	15,507	5	–	1	–	1	–	–	–
Woburn,	15,308	1	0	–	–	–	–	–	–
Newburyport,	14,949	6	2	2	–	1	–	–	–
Gardner,	14,699	4	1	1	–	–	–	–	–
Marlborough,	14,579	8	1	4	–	2	–	–	–
Clinton,	13,075	4	–	1	–	1	–	–	–
Milford,	13,055	6	0	3	1	1	–	–	–
Adams,	13,026	5	1	1	–	–	–	–	–
Framingham,	12,948	2	0	–	–	–	–	–	–
Weymouth,	12,895	–	–	–	–	–	–	–	–
Watertown,	12,875	1	1	1	–	–	–	–	–
Southbridge,	12,592	1	–	–	–	–	–	–	–
Plymouth,	12,141	–	–	–	–	–	–	–	–
Webster,	11,509	4	3	2	–	–	–	–	–
Methuen,	11,448	2	1	–	–	–	–	–	–
Wakefield,	11,404	1	1	–	–	–	–	–	–
Arlington,	11,187	2	–	–	–	–	–	–	–
Greenfield,	10,427	1	1	1	–	–	–	–	–
Winthrop,	10,132	2	–	–	–	–	–	–	–
Recapitulation.									
Total of reporting towns,	2,565,623	695	262	248	36	49	4	5	–

WEEK ENDING SEPT. 9, 1911.

CITIES AND TOWNS.	Population. Census for 1910.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM— Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	670,585	182	60	74	16	18	–	2	3
Worcester,	145,986	36	9	10	3	2	–	–	–
Fall River,	119,295	53	34	29	6	4	–	1	–
Lowell,	106,294	26	10	–	–	–	–	–	–
Cambridge,	104,839	19	6	5	1	1	–	–	–
New Bedford,	96,652	33	16	14	1	1	–	1	–
Lynn,	89,336	24	8	3	–	2	–	–	–
Springfield,	88,926	26	8	9	4	1	–	1	–
Lawrence,	85,892	24	15	13	2	1	–	–	–
Somerville,	77,236	17	6	2	1	1	–	–	–
Holyoke,	57,730	19	14	2	–	2	–	–	–
Brockton,	56,878	4	0	1	–	–	–	–	–
Malden,	44,404	11	3	5	2	2	–	–	–
Haverhill,	44,115	9	1	3	1	–	1	–	–
Salem,	43,697	15	5	2	–	–	–	–	–
Newton,	39,806	12	3	1	–	–	–	–	–
Fitchburg,	37,826	5	2	–	–	–	–	–	–
Taunton,	34,259	19	5	9	2	2	–	–	–
Everett,	33,484	10	5	1	–	–	–	–	–
Quincy,	32,642	6	2	1	–	–	1	–	–
Chelsea,	32,452	9	6	3	1	1	–	–	1
Pittsfield,	32,121	15	7	6	–	–	–	–	–
Waltham,	27,834	6	2	4	1	–	–	–	–
Brookline,	27,792	2	–	–	–	–	–	–	–
Chicopee,	25,401	6	2	–	–	–	–	–	–
Gloucester,	24,398	5	1	2	–	–	–	–	–
Medford,	23,150	8	1	–	–	–	–	–	–
North Adams,	22,019	10	2	2	–	–	–	–	–
Northampton,	19,431	8	0	1	–	–	–	–	–
Beverly,	18,650	7	1	–	–	–	–	–	–
Revere,	18,219	9	3	2	–	–	–	–	–
Leominster,	17,580	4	2	–	–	–	–	–	–
Attleborough,	16,215	4	1	–	–	–	–	–	–
Westfield,	16,044	5	1	3	–	3	–	–	–
Peabody,	15,721	–	–	–	–	–	–	–	–
Melrose,	15,715	3	–	1	1	–	–	–	–
Hyde Park,	15,507	2	–	–	–	–	–	–	–
Woburn,	15,308	0	–	–	–	–	–	–	–
Newburyport,	14,949	3	1	2	–	–	–	–	–
Gardner,	14,699	5	1	–	–	–	–	–	–
Marlborough,	14,579	4	1	2	1	–	–	–	–
Clinton,	13,075	3	–	1	–	–	–	1	–
Milford,	13,055	2	0	–	–	–	–	–	–
Adams,	13,026	3	1	–	–	–	–	–	–
Framingham,	12,948	3	1	1	–	–	–	–	1
Weymouth,	12,895	–	–	–	–	–	–	–	–
Watertown,	12,875	3	0	–	–	–	–	–	–
Southbridge,	12,592	0	–	–	–	–	–	–	–
Plymouth,	12,141	–	–	–	–	–	–	–	–
Webster,	11,509	2	2	–	–	–	–	–	–
Methuen,	11,448	1	1	1	–	–	–	–	–
Wakefield,	11,404	2	2	2	–	–	–	–	–
Arlington,	11,187	1	–	–	–	–	–	–	–
Greenfield,	10,427	0	–	–	–	–	–	–	–
Winthrop,	10,132	0	–	–	–	–	–	–	–
Recapitulation.									
Total of reporting towns,	2,565,623	685	251	217	43	41	2	6	5

WEEK ENDING SEPT. 16, 1911.

CITIES AND TOWNS.	Population. Census for 1910.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM — Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	670,585	213	71	85	20	22	–	3	3
Worcester,	145,986	49	14	9	3	2	–	2	–
Fall River,	119,295	49	23	25	2	5	–	1	–
Lowell,	106,294	31	13	12	3	1	–	–	–
Cambridge,	104,839	26	9	11	3	3	1	–	–
New Bedford,	96,652	33	15	13	2	2	–	1	–
Lynn,	89,336	21	5	3	1	–	1	1	–
Springfield,	88,926	29	12	10	4	–	–	–	–
Lawrence,	85,892	22	12	10	–	3	–	1	–
Somerville,	77,236	10	–	2	1	–	1	–	–
Holyoke,	57,730	25	9	3	2	–	–	–	–
Brockton,	56,878	11	3	5	1	2	–	–	–
Malden,	44,404	10	4	3	–	1	–	1	–
Haverhill,	44,115	20	3	2	–	–	1	–	–
Salem,	43,697	15	7	2	–	2	–	–	–
Newton,	39,806	9	1	1	–	1	–	–	–
Fitchburg,	37,826	6	3	2	–	1	–	–	–
Taunton,	34,259	16	2	3	–	2	–	–	–
Everett,	33,484	2	1	1	–	–	–	–	–
Quincy,	32,642	9	7	3	1	–	–	–	–
Chelsea,	32,452	10	3	2	2	–	–	–	–
Pittsfield,	32,121	17	2	2	1	1	–	–	–
Waltham,	27,834	11	4	–	–	–	–	–	–
Brookline,	27,792	5	1	–	–	–	–	–	–
Chicopee,	25,401	5	1	–	–	–	–	–	–
Gloucester,	24,398	6	3	1	–	1	–	–	–
Medford,	23,150	4	3	–	–	–	–	–	–
North Adams,	22,019	6	2	3	–	–	–	2	–
Northampton,	19,431	5	1	–	–	–	–	–	–
Beverly,	18,650	4	1	–	–	–	–	–	–
Revere,	18,219	2	1	–	–	–	–	–	–
Leominster,	17,580	3	1	1	–	1	–	–	–
Attleborough,	16,215	5	2	–	–	–	–	–	–
Westfield,	16,044	5	2	1	–	1	–	–	–
Peabody,	15,721	–	–	–	–	–	–	–	–
Melrose,	15,715	5	2	1	–	–	–	–	–
Hyde Park,	15,507	1	–	1	–	–	–	–	–
Woburn,	15,308	4	0	1	–	1	–	–	–
Newburyport,	14,949	8	1	3	–	2	–	–	–
Gardner,	14,699	4	2	–	–	–	–	–	–
Marlborough,	14,579	5	1	1	–	–	–	–	–
Clinton,	13,075	2	–	–	–	–	–	–	–
Milford,	13,055	3	1	1	–	–	–	–	–
Adams,	13,026	3	2	–	–	–	–	–	–
Framingham,	12,948	5	2	1	–	–	–	–	–
Weymouth,	12,895	–	–	–	–	–	–	–	–
Watertown,	12,875	5	1	1	–	–	–	–	–
Southbridge,	12,592	5	2	2	–	–	–	–	–
Plymouth,	12,141	–	–	–	–	–	–	–	–
Webster,	11,509	2	1	–	–	–	–	–	–
Methuen,	11,448	0	–	–	–	–	–	–	–
Wakefield,	11,404	1	–	–	–	–	–	–	–
Arlington,	11,187	–	–	–	–	–	–	–	–
Greenfield,	10,427	4	–	2	–	–	–	–	–
Winthrop,	10,132	0	–	–	–	–	–	–	–
Recapitulation.									
Total of reporting towns,	2,554,436	751	256	229	46	54	4	12	3

WEEK ENDING SEPT. 23, 1911.

CITIES AND TOWNS.	Population. Census for 1910.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM— Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	670,585	210	72	76	10	12	2	4	–
Worcester,	145,986	39	7	13	5	3	1	1	–
Fall River,	119,295	47	21	22	5	2	–	3	–
Lowell,	106,294	27	7	3	2	1	–	–	–
Cambridge,	104,839	19	5	7	2	3	1	–	–
New Bedford,	96,652	35	19	18	3	2	1	1	–
Lynn,	89,336	16	2	1	–	1	–	–	–
Springfield,	88,926	18	9	3	1	–	–	–	–
Lawrence,	85,892	31	17	15	1	–	2	–	–
Somerville,	77,236	8	1	1	–	1	–	–	–
Holyoke,	57,730	15	6	1	1	–	–	–	–
Brockton,	56,878	12	4	4	2	–	–	–	–
Malden,	44,404	8	3	3	–	–	–	–	–
Haverhill,	44,115	11	1	3	1	1	–	–	–
Salem,	43,697	16	5	1	1	–	–	–	–
Newton,	39,806	10	2	–	–	–	–	–	–
Fitchburg,	37,826	8	3	1	–	1	–	–	–
Taunton,	34,259	18	4	8	1	2	–	–	–
Everett,	33,484	5	–	1	–	1	–	–	–
Quincy,	32,642	6	4	2	–	–	1	–	–
Chelsea,	32,452	10	3	1	1	–	–	–	–
Pittsfield,	32,121	7	1	6	1	3	1	–	–
Waltham,	27,834	8	1	1	1	–	–	–	–
Brookline,	27,792	7	1	–	–	–	–	–	–
Chicopee,	25,401	2	1	2	–	1	–	–	–
Gloucester,	24,398	8	4	1	–	–	–	1	–
Medford,	23,150	6	2	–	–	–	–	–	–
North Adams,	22,019	3	–	–	–	–	–	–	–
Northampton,	19,431	8	1	2	–	2	–	–	–
Beverly,	18,650	7	–	–	–	–	–	–	–
Revere,	18,219	4	1	1	–	–	–	–	–
Leominster,	17,580	5	1	2	–	–	–	–	–
Attleborough,	16,215	3	2	3	–	–	–	1	–
Westfield,	16,044	5	–	3	–	2	1	–	–
Peabody,	15,721	–	–	–	–	–	–	–	–
Melrose,	15,715	2	–	–	–	–	–	–	–
Hyde Park,	15,507	3	–	–	–	–	–	–	–
Woburn,	15,308	3	1	1	–	1	–	–	–
Newburyport,	14,949	2	–	1	1	–	–	–	–
Gardner,	14,699	3	1	–	–	–	–	–	–
Marlborough,	14,579	8	0	–	–	–	–	–	–
Clinton,	13,075	2	1	–	–	–	–	–	–
Milford,	13,055	4	1	2	–	–	–	–	–
Adams,	13,026	3	2	–	–	–	–	–	–
Framingham,	12,948	3	0	–	–	–	–	–	–
Weymouth,	12,895	–	–	–	–	–	–	–	–
Watertown,	12,875	2	0	1	–	1	–	–	–
Southbridge,	12,592	4	2	1	1	–	–	–	–
Plymouth,	12,141	–	–	–	–	–	–	–	–
Webster,	11,509	7	3	4	–	1	–	–	–
Methuen,	11,448	3	3	–	–	–	–	–	–
Wakefield,	11,404	3	1	–	–	–	–	–	–
Arlington,	11,187	1	–	–	–	–	–	–	–
Greenfield,	10,427	1	–	–	–	–	–	–	–
Winthrop,	10,132	3	–	–	–	–	–	–	–
Recapitulation.									
Total of reporting towns,	2,565,623	699	225	215	40	41	10	11	–

WEEK ENDING SEPT. 30, 1911.

CITIES AND TOWNS.	Population. Census for 1910.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM—					
				Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	670,585	209	50	69	23	15	3	2	2
Worcester,	145,986	48	16	10	2	3	1	1	–
Fall River,	119,295	34	15	14	4	2	2	1	–
Lowell,	106,294	27	15	9	5	2	–	–	–
Cambridge,	104,839	29	10	14	1	5	1	1	–
New Bedford,	96,652	36	21	18	4	1	1	1	–
Lynn,	89,336	24	7	2	–	2	–	–	–
Springfield,	88,926	27	10	10	3	1	–	1	–
Lawrence,	85,892	16	5	5	–	3	–	–	–
Somerville,	77,236	16	6	3	–	1	1	1	–
Holyoke,	57,730	23	10	4	1	1	–	1	–
Brockton,	56,878	15	5	6	1	3	–	–	–
Malden,	44,404	14	3	2	–	2	–	–	–
Haverhill,	44,115	7	3	1	1	–	–	–	–
Salem,	43,697	18	10	3	2	–	–	–	–
Newton,	39,806	9	–	2	–	1	–	–	–
Fitchburg,	37,826	10	3	3	1	–	–	–	–
Taunton,	34,259	12	4	6	–	1	–	–	–
Everett,	33,484	6	3	1	–	–	–	–	–
Quincy,	32,642	3	0	–	–	–	–	–	–
Chelsea,	32,452	8	2	1	–	–	–	–	–
Pittsfield,	32,121	17	3	5	–	2	–	–	–
Waltham,	27,834	6	2	–	–	–	–	–	–
Brookline,	27,792	5	–	2	–	–	–	1	–
Chicopee,	25,401	5	1	1	–	–	–	–	–
Gloucester,	24,398	5	1	1	–	–	1	–	–
Medford,	23,150	5	1	2	1	–	1	–	–
North Adams,	22,019	3	2	2	–	–	–	–	–
Northampton,	19,431	6	1	1	–	–	–	–	–
Beverly,	18,650	3	–	1	–	1	–	–	–
Revere,	18,219	1	–	–	–	–	–	–	–
Leominster,	17,580	3	–	–	–	–	–	–	–
Attleborough,	16,215	3	0	2	–	1	–	1	–
Westfield,	16,044	5	1	4	–	3	1	–	–
Peabody,	15,721	–	–	–	–	–	–	–	–
Melrose,	15,715	3	–	–	–	–	–	–	–
Hyde Park,	15,507	1	–	–	–	–	–	–	–
Woburn,	15,308	5	1	1	–	1	–	–	–
Newburyport,	14,949	6	1	2	1	1	–	–	–
Gardner,	14,699	2	–	1	–	1	–	–	–
Marlborough,	14,579	4	1	–	–	–	–	–	–
Clinton,	13,075	2	1	–	–	–	–	–	–
Milford,	13,055	4	0	–	–	–	–	–	–
Adams,	13,026	9	6	3	–	–	2	–	–
Framingham,	12,948	4	1	–	–	–	–	–	–
Weymouth,	12,895	–	–	–	–	–	–	–	–
Watertown,	12,875	5	4	–	–	–	–	–	–
Southbridge,	12,592	2	1	–	–	–	–	–	–
Plymouth,	12,141	–	–	–	–	–	–	–	–
Webster,	11,509	3	0	–	–	–	–	–	–
Methuen,	11,448	1	–	–	–	–	–	–	–
Wakefield,	11,404	5	–	–	–	–	–	–	–
Arlington,	11,187	3	1	1	–	–	–	–	–
Greenfield,	10,427	3	1	1	–	–	–	–	–
Winthrop,	10,132	2	–	1	1	–	–	–	–
Recapitulation.									
Total of reporting towns,	2,565,623	722	228	214	51	53	14	11	2

WEEKLY RETURNS OF DEATHS FROM CERTAIN INFECTIOUS DISEASES.

Deaths from Infectious Diseases not specifically mentioned in above Tables during the Weeks of Sept. 2, 9, 16, 23 and 30, 1911.

Disease.	Place.	Week ending — Sept. 2.	Sept. 9.	Sept. 16.	Sept. 23.	Sept. 30.
Cerebro-spinal meningitis.	Arlington,	–	–	–	–	1
	Boston,	1	–	–	–	–
	Brockton,	–	–	1	–	–
	Everett,	–	–	–	–	1
	Framingham,	–	–	1	–	–
	Marlborough,	1	1	–	–	–
	Waltham,	–	1	–	–	–
	Worcester,	–	1	–	–	–
Scarlet fever,	Boston,	–	–	–	1	1
	Brookline,	–	–	–	–	1
	Gloucester,	–	1	–	–	–
	Lowell,	–	–	1	–	–
	Methuen,	–	1	–	–	–
	Springfield,	–	–	–	1	–
	Worcester,	–	1	1	1	–
Whooping cough,	Boston,	1	–	2	2	–
	Cambridge,	1	–	–	–	–
	Chicopee,	1	–	–	–	–
	Fall River,	–	1	–	–	–
	Fitchburg,	1	–	1	–	–
	Holyoke,	–	–	1	–	–
	Lawrence,	1	–	–	1	–
	New Bedford,	1	–	–	–	–
	Salem,	–	1	–	–	–
	Taunton,	–	–	–	–	3
Erysipelas,	Boston,	–	2	–	1	1
	Lawrence,	–	–	–	–	1
Tuberculosis other than pulmonary.	Boston,	5	3	3	5	1
	Brockton,	2	–	–	–	1
	Cambridge,	–	–	1	1	–
	Chelsea,	–	–	–	–	1
	Everett,	1	–	–	–	–
	Fall River,	–	–	1	–	–
	Fitchburg,	–	–	–	–	2
	Haverhill,	–	–	1	–	–
	Hyde Park,	–	–	1	–	–
	Lawrence,	–	–	1	1	–
	Lowell,	–	–	–	–	1
	Malden,	–	–	1	1	–
	Marlborough,	–	–	1	–	–
	New Bedford,	–	1	–	1	–

DEATHS FROM INFECTIOUS DISEASES, ETC. — *Concluded.*

DISEASE.	Place.	Week ending —				
		Sept. 2.	Sept. 9.	Sept. 16.	Sept. 23.	Sept. 30.
Tuberculosis other than pulmonary — *Con.*	Newton,	–	–	–	–	1
	Newburyport,	–	1	1	–	–
	Pittsfield,	–	–	–	–	1
	Salem,	–	1	–	–	1
	Springfield,	2	–	–	–	–
	Taunton,	–	–	–	–	1
	Waltham,	1	2	–	–	–
	Worcester,	–	–	–	–	1
Anterior poliomyelitis,	Cambridge,	–	1	–	–	–
	Fall River,	–	1	–	–	–
	North Adams,	1	–	1	–	–
	Northampton,	–	1	–	–	–
Meningitis other than cerebro-spinal.	Webster,	1	–	–	–	–
Tetanus,	Leominster,	–	–	–	1	–

WEEKLY RETURNS OF CASES OF INFECTIOUS DISEASES.

Cases of Infectious Diseases reported during the Weeks of September 2, 9, 16, 23 and 30, 1911.

[Under the provisions of section 52 of chapter 75 of the Revised Laws.]

	Week ending—					
	Sept. 2.	Sept. 9.	Sept. 16.	Sept. 23.	Sept. 30.	Total.
Diphtheria,	73	65	108	127	132	505
Measles,	37	33	39	28	36	173
Scarlet fever,	50	56	71	60	84	321
Typhoid fever,	99	93	104	100	101	497
Tuberculosis, pulmonary,	132	123	115	134	124	628
Tuberculosis other than pulmonary,	–	4	–	2	–	6
Cerebro-spinal meningitis,	2	2	2	2	1	9
Meningitis other than cerebro-spinal,	–	–	1	–	2	3
Whooping cough,	46	36	29	33	53	197
Varicella,	1	12	29	6	30	78
Erysipelas,[1]	–	–	1	–	–	1
Mumps,[1]	1	2	–	2	1	6
Ophthalmia neonatorum,	20	23	41	30	33	157
Anterior poliomyelitis,	14	9	14	17	5	59
Trachoma,	–	–	1	2	–	3
Tetanus,	–	–	1	–	–	1
Smallpox,	–	–	–	1	–	1
Malaria,	6	–	1	–	1	8
Actinomycosis,	–	1	–	–	–	1

[1] Erysipelas and mumps are not diseases notifiable under section 52 of chapter 75 of the Revised Laws. The figures concerning these diseases are, therefore, incomplete.

MONTHLY REPORT ON INSPECTION OF FOOD AND DRUGS.

The following summary presents the results of the examination of food and drugs made by the State Board of Health during the month of September, 1911:—

Articles examined.	Number found to be of Good Quality.	Number adulterated or varying from the Legal Standard.	Total.	Articles examined.	Number found to be of Good Quality.	Number adulterated or varying from the Legal Standard.	Total.
Bread,	2	–	2	Jelly,	1	–	1
Canned asparagus,	1	–	1	Lard,	1	–	1
Cider,	2	–	2	Meat products:—			
Condensed milk,	3	1	4	Mince meat,	1	–	1
Cream,	6	–	6	Sausage,	1	–	1
Cream of tartar,	3	–	3	Milk,	226	56	282
Drugs,	57	6	63	Olive oil,	2	3	5
Flavoring extracts:—				Proprietary food,	–	1	1
				Salad dressing,	4	–	4
Lemon,	4	2	6	Spices,	15	–	15
Vanilla,	3	0	3	Vinegar,	7	1	8
Grape juice,	1	–	1				
Honey,	1	–	1	Total,	341	70	411

The samples of drugs found to be adulterated were alcohol, camphor liniment and spirits of peppermint.

The cities and towns in which samples were collected were: Athol, Attleborough, Boston, Cambridge, Chelsea, Cheshire, Dalton, Fall River, Fitchburg, Hyde Park, Lanesborough, Lawrence, Lenox, Malden, Maynard, Mendon, Milford, Millbury, New Bedford, North Andover, Pittsfield, Provincetown, Reading, Richmond, Somerville, Taunton, Upton, Weymouth, Winchester and Woburn.

PROSECUTIONS FOR VIOLATIONS OF THE LAW RELATING TO FOOD AND DRUGS.

Nine convictions were secured during the month of September, 1911, for selling adulterated food and drugs, as follows:—

No.	Name of Defendant.	Place.	Character of Article sold.
1	Henry J. Doherty,	Boston,	Alcohol (denatured) not properly marked.
2	Paul Hoffman,	Taunton,	Milk (total solids, 11.72).[1]
3	Henry Kirchner,	Pittsfield,	Milk (total solids, 11.34).[2]
4	Albert L. Nason,	Upton,	Milk (total solids, 9.76).[1]
5	Lemuel F. Nickerson,	Provincetown,	Milk (total solids, 11.64).[1]
6	Robert A. Rice,	Pittsfield,	Milk (total solids, 11.26).[1]
7	Joseph Steele,	Provincetown,	Milk (total solids, 11.84).[1]
8	G. Edward Winn,	Woburn,	Milk (total solids, 10.12).[1]
9	G. Edward Winn,	Woburn,	Milk (total solids, 10.24).[1]

[1] Watered. [2] Skimmed.

Fines imposed, $300.

LIST OF ADULTERATED OR IMPROPERLY LABELED FOODS, ETC., FOR SEPTEMBER, 1911.

Number of Sample.	Character of Sample.	Name of Manufacturer, Wholesaler or Producer.	Results of Analyses.
q 7676	Lemon extract,	F. P. Adams & Co., Boston,	0.1 per cent. lemon oil present. Labeled 1½ per cent. oil.
15430	Camphor liniment,	Brockton Cut Price Drug Store, Brockton and Taunton,	53.5 per cent.; U. S. P. strength.
9306 N	Camphor liniment,	South End Pharmacy, Boston,	80 per cent.; U. S. P. strength.
9434 N	Camphor liniment,	Roma Pharmacy, Boston,	83 per cent.; U. S. P. strength.
8421 R	Milk,	Frank Wehry, Lanesborough,	Total solids, 12.10 per cent.; fat, 4.10 per cent.; contained added water.
8487 R	Milk,	Louis W. Cornelius, Richmond,	Total solids, 13.00 per cent.; fat, 4.90 per cent.; contained added water.
8537 R	Milk,	John Day, Woburn,	Total solids, 12.36 per cent.; fat, 4.15 per cent.; contained added water.
15491	Milk,	Abraham Buckley, Millbury,	Total solids, 11.18 per cent.; fat, 3.45 per cent.; contained added water.
8609 R	Milk,	Michael J. Flynn, Winchester,	Total solids, 11.80 per cent.; fat, 3.80 per cent.; contained added water.
q 7738	Milk,	Demetris Economos, Worcester,	Total solids, 10.36 per cent.; fat, 2.80 per cent.; contained added water.
8449 R	Milk,	George W. Sykes,	Total solids, 10.76 per cent.; fat, 2.55 per cent.; proteins 3.12 per cent. skimmed.
q 6664	Milk,	Walter F. Beal, Mendon,	Total solids, 10.55 per cent.; fat, 2.25 per cent.; proteins 2.84 per cent. skimmed.
q 7717	Milk,	Joseph Northrup, Mendon,	Total solids, 11.32 per cent.; fat, 2.60 per cent.; proteins 3.24 per cent. skimmed.

INSPECTION OF DAIRIES.

During the month of September, 1911, 210 dairies were examined in the following places:—

Place.	Number examined.	Number found to present no Objectionable Features.	Per Cent.	Number concerning which Letters were sent.	Per Cent.
Acushnet,	–	–	–	–	–
Third inspection,	1	1	100.00	–	–
Berkley,	2	2	100.00	–	–
Second inspection,	2	1	50.00	1	50.00
Blackstone,	12	9	75.00	3	25.00
Second inspection,	13	9	69.23	4	30.77
Dartmouth,	67	38	56.72	29	43.28
Second inspection,	102	70	68.63	32	31.37
Third inspection,	1	1	100.00	–	–
Lakeville,	–	–	–	–	–
Third inspection,	1	1	100.00	–	–
New Bedford,	1	1	100.00	–	–
Rochester,	5	2	40.00	3	60.00
Second inspection,	3	2	66.67	1	33.33

Total number of dairies examined,	210
Number found to be free from objectionable conditions,	137
Number concerning which letters were sent,	73
Total number of conditions to which attention was called,	229
Percentage of dairies which passed inspection,	65.24

In addition to the above, 27 dairies were visited at which the sale of milk had been discontinued.

The names of the owners of the dairies found to be worthy of commendation follow:—

Acushnet.

Class B.

A. P. R. Gilmore.‡ †

Berkley.

Class B.

Haskins, John T.*† Paul, C. F. Randall, John

* Second inspection. † Reported favorably on first inspection. ‡ Third inspection.

Blackstone.

Class B.

Billings, John M.*
Blackstone Town Farm
Boisvert, Media
Chase, F. F.
Crane, Samuel V.
Eames, Eugene J.* †
Fuller, O. F.* †
Gaudet, Napoleon
Goff, Joseph B.
Hagany, James *
Kelly, Seth
Martin, F. H.
Scott, Malcolm *
Thayer, Albert W.*
Thayer, Ernest E.*
Thayer, William H.*
Thomas, A. C.
Webster, Albert * †

Dartmouth.

Class A.

Grinnell, Fred
Littlefield, Charles E.* †
Prescott, Oliver *

Class B.

Allen, A. A.
Allen, William W.* †
Anthony, Daniel A.* †
Anton, Nicholas *
Ashley, H. G.*
Ashton, Oliver *
Bourchard Brothers *
Brassels, J. S.
Briggs, Charles
Brightman, P. E.
Brownell, Pardon C.*
Carr, Rodman
Charpentier, A.
Clark, A. F.* †
Collins, William
Cook, Edward R.*
Cornell, John A.*
Cravillo, Joseph
Cushman, C. A.* †
Dartmouth Town Farm *
Davis, M. M.* †
Davis, Willis
DeCosta, Manuel *
Demoranville, Samuel
Dennis, E. K.*
Destremps, Louis G.
Dias, John *
Dimus, Antone *
Dolan, Thomas *
Dunn, John *
Edwards, Clarence *
Enos, Manuel
Faunce, A. B.* †
Faunce, Silas * †
Fawcett, John
Fernandez, Joseph A.*
Frates, Frank F.*
Freitas, E. M.
Gidley, Franklin P.*
Gidley, Job S.*
Gifford, Elwood *
Gifford, George W.*
Green, John
Hambley, George H.*
Harding, Thomas * †
Homer, Frank
Howland, Charles W.‡
Howland, George * †
Jones, Mrs. E. C.* †
King, A. H.* †
King, H. B.
Kirby, Z. D.*
Kirby & Hicks * †
LaPlante, A. (Ryder Farm) * †
Larondo, M. S.
Leachman, A. L.
LeMaire, N.
Lopes, Antone J.
Macomber, Charles A.*
Maciel, Manuel J.*
Madeiros, Manuel V.*
Manchester, J. W.*
Mashada, Manuel
Maxfield, William * †
Mead, Charles H.*
Morrill, John *
Mosher, Perry J.* †
Motta, Frank B.*
Motta & Costa *
Negus, Charles H.*
Negus, Charles R.
Nunes, Joseph
Nye, Joseph R.
Owen, Charles *
Perry, Joseph
Pettey, E. T.*
Potter, Chas. Cole *
Potter, William A.*
Queripel, Benj.*
Reed, Lemuel
Reed, T. B.
Roderigue, John
Rotch, T. R.*
Santos, Manuel
Santos, Estate of Manuel A.
Schroeder, Henry
Seabury, R. Fred *
Silvia, Frank N.
Slocum, Clarence H.*
Slocum, Walter C.*
Smith, Elisha M.*
Snell, George A.*
Souza, Antone *
Spooner, Z. T.*
Sweeney, Daniel *
Tripp, George A.*
Tucker, Joseph F.* †
Vincent, M. L.
Wheaton, Clarence
Whiteside, James *
Wilbur, Thomas K.*
Williams, J. E.*
Wing, Herbert * †
Woodhouse, William *
Wordell, Willis

* Second inspection. † Reported favorably on first inspection. ‡ Third inspection.

LAKEVILLE.

Class B.

Peirce, E. E.‡

NEW BEDFORD.

Class B.

Arruda, Jacquin

ROCHESTER.

Class B.

Michon, Fred E. Peirce, Estate of Seth * Schultz, J. F.
Isherwood, Samuel *

DON'TS FOR DAIRYMEN.

(1) DON'T take it as a personal insult if Boards of Health criticise the way you run your business. They know that thousand of human beings, mainly children, die every year because of bad milk. They know that bad milk is due, to some extent, to wrong conditions at the farm. They know that these wrong conditions can, in most instances, be removed at comparatively small expense. They know that there is little profit to the farmer in the milk business under present conditions. They know that the public is demanding more and more a higher grade of milk. They know that the public should pay and should be willing to pay the farmer a higher and more satisfactory price for good sanitary milk.

(2) DON'T buy or keep diseased cattle. They may, and often do, infect the rest of your herd. The herd should be examined every six months by a competent veterinarian, and all animals suspected of being in bad health, should be removed at once. Inasmuch as the diagnosis of tuberculosis through the physical examination of cattle is unreliable except in its later stages, it is recommended that the tuberculin test for this disease be employed. If animals react to the tuberculin test, they should be removed immediately from the herd and the stable should be properly disinfected. If you keep your herd free from tuberculosis, you can with reason, demand more for your milk, for people are rightly afraid of tuberculous milk inasmuch as it has been shown to be responsible for much tuberculosis in human beings, especially tuberculosis of bones and joints.

* Second inspection. ‡ Third Inspection.

(3) DON'T sell milk from cows suffering with tuberculosis, garget, cow pox, anthrax, foot and mouth disease. Milk that is bloody, stringy, or otherwise unnatural in appearance, should be rejected.

(4) DON'T make the mistake of thinking that any place is good enough to keep cows in. A cow should have 500 cubic feet of air space, 4 square feet of light, and plenty of fresh air, without draughts, otherwise, like a human being, she is likely to succumb to tuberculosis and other diseases to which she may be exposed. The stable should preferably have no cellar or storage loft, and no other animals should be kept in the same tie-up. The floor should be tight and smooth and of cement if possible. The walls and ceiling should be tight, kept clean, free from cob-webs, hay and dust, and should be whitewashed at least twice a year.

(5) DON'T store manure in, under, or near the barn. The manure should be removed daily to a distance of at least 50 feet.

(6) DON'T allow water or liquid manure to collect in pools in the barnyard, but drain it away or collect it in cesspools from which it can be readily emptied. Many farmers waste this liquid manure, whereas, if spread upon the fields, it is a most valuable form of fertilizer.

(7) DON'T keep pigs in, under, or near the barn. Most pig pens are very filthy, and the germ of meat poisoning has been found in normal pig manure. Pig pens and manure piles breed flies, and flies carry disease germs to the milk pail.

(8) DON'T use horse manure for bedding your cows. Excrement of all sorts should be removed from the neighborhood of the cows, as soon as possible. Tuberculous cattle excrete millions of tubercule bacilli in their feces, and there is some evidence to show that infantile paralysis may be spread through dust contaminated by horse manure.

(9) DON'T fail to keep your cows clean. The flanks of cattle are oftentimes allowed to become coated with manure and filth. If this filth is not removed, it is bound to drop into the pail when you milk, and lifelong misery to some human being may be the result. The entire body of the cow should be cleaned daily, and the hair in the vicinity of the udder should be clipped.

(10) DON'T sweep, throw down hay, or otherwise stir up the dust of the tie-up within an hour before milking. Germs get into the milk on the dust.

(11) DON'T milk unless your hands and clothing are clean, for in the course of your ordinary farming operations your hands and clothes are bound at times to be covered with germ laden dirt, and unless you take care, these germs will get into the milk. Especially dangerous in this regard are those who have had in the

past, typhoid fever. Such persons may excrete typhoid germs in the urine and stools for many years.

(12) DON'T have a privy anywhere near your cow tie-up, for many human beings excrete disease germs in their stools and urines and these germs may be brought to the milk either in dust or through the agency of flies.

(13) DON'T have anything to do with the milk if you are not feeling well. You may be coming down with typhoid fever, scarlet fever or other contagious disease, and you may spread it through the milk.

(14) DON'T use a broad open pail for milking. Use one with a small opening, for the smaller the opening, the smaller the number of germs that can drop into the pail.

(15) DON'T strain or handle the milk back of the cows. Always use a milk room. The milk room should be separated from all other buildings; should be light, clean, well ventilated, thoroughly screened, properly drained, and kept free from dust and odors.

(16) DON'T use utensils that are rusty and rough inside. They are impossible to keep clean. Don't keep utensils in a stable after washing, keep them inverted in pure air and in the sun. They should be thoroughly scalded before being used.

(17) DON'T fail to cool your milk as soon as possible to 50 degrees Fahrenheit, and don't fail to keep it at that temperature during storage. Don't mix warm milk with that which has been cooled, and don't allow milk to freeze. Don't cool your milk in a watering trough. Animals which drink there may infect it with diseases of the respiratory tract, such as glanders and tuberculosis. The proper cooling of milk cannot be accomplished without the free use of ice. Germs do not like their food cold. On the other hand, in warm milk they multiply rapidly. A single typhoid germ in warm milk becomes two germs every twenty minutes which means that in seven hours a single germ will become over two million germs. A single drop of typhoid urine may contain many millions of typhoid germs to start with. It can easily be seen that such a drop of urine in a can of warm milk might cause, and has caused epidemic typhoid fever in hundreds of people.

(18) FINALLY DON'T forget that all that health authorities want you to do is to produce a safe, healthful milk. We know this can be done with an inexpensive plant, if you will simply take a little care. If you do produce a clean, healthful milk we have no doubt that you will get a price for it which will be financially satisfactory. We want to help you in every way in this work. Let us hear from you if you do not understand our point of view.

POSSIBLE DANGERS FROM THE SALE OF GREEN ORANGES.

The attention of local boards of health is called herewith to allegations made to the State Board of Health by the Florida Citrus Exchange that the fruit markets of this State are likely, within the next month, to be flooded with unripe oranges from the State of Florida.

This is a situation with which local boards of health can easily cope, in accordance with section 70 of chapter 56 of the Revised Laws.

PROPRIETARY PREPARATION ADVERTISED AS UNSALABLE IN JULY, 1911.

Macdonald's Astringent Hair Tonic for Dandruff and Hair Loss. Manufactured by Macdonald Toilet Specialty Co., Detroit, New York and Toronto. (No statement of the percentage of alcohol.)

PROPRIETARY PREPARATION ADVERTISED AS UNSALABLE IN AUGUST, 1911.

Milk Cordial-Panna Cream. A Health Tonic. Prepared by Prof. Antonio Alai, Suterville, Pa. (Incorrect statement of the amount of alcohol.)

A NOTE CONCERNING THE OUTFIT FOR THE PREVENTION OF OPHTHALMIA NEONATORUM AS SUPPLIED BY THE MASSACHUSETTS STATE BOARD OF HEALTH.

The outfit supplied by the State Board of Health for the prevention of ophthalmia neonatorum has proved to be, in practice, eminently satisfactory. One criticism, however, has been made against this outfit: that infectious material from one case might be transferred by the tip of the dropper to the eyes of another non-infected case. In order to determine the validity of this criticism a series of experiments has been carried out by Mr. Henry N. Jones, bacteriologist of the Board, with the following results.

Experiment No. 1.

A drop of the silver nitrate solution (1 per cent.) was expressed upon the surface of an agar plate which was heavily overgrown with a culture of *staphylococcus pyogenes aureus*. In doing this, the tip of the dropper was brought into direct contact with the bacterial growth so as to insure as great a contamination of the instrument as possible. At the same time a drop of the fluid was partially extruded from the orifice of the dropper and then drawn back into the tip. A drop was then forced completely out of the dropper, the instrument removed from contact with the bacterial growth, and the rubber cap replaced over the end of the tip. After fifteen minutes the rubber tip was again removed and a drop of the fluid was placed upon a sterile agar plate and streaked over its surface. The plate was then incubated for 48 hours. At the end of this time, inasmuch as the plate remained sterile, it was concluded that no living organisms had been transferred to it by the use of the dropper.

Experiment No. 2.

The above experiment was repeated except that the inoculation of the agar plate with a drop of the solution from the contaminated dropper was done immediately. This plate also remained sterile after prolonged incubation.

Experiment No. 3.

The fluid in the tip of the dropper was again contaminated by first protruding a drop of the solution by bringing it into contact with the culture of *staphylococcus pyogenes aureus* and by then drawing the fluid turbid with the organisms back into the dropper. So gross was the contamination resulting from this procedure that it could easily be seen through the dark glass of the body of the instrument. A small amount of the first drop extruded from the dropper was then transferred by a platinum needle to a tube 4 or 5 cubic centimeters of peptonized beef broth. In this way it is believed there was secured a much higher dilution of the organisms and the silver nitrate solution containing them than could occur during the routine use of the dropper.

This tube of bouillon was then incubated for 48 hours but remained sterile.

The above experiments were then repeated and the same results were obtained in each case.

Inasmuch as the dropper was grossly contaminated in performing these experiments, and the most resistant organism likely to be found in ophthalmia was used, it does not seem possible that infection can be

transferred through the dropper, even though it be handled with great carelessness.

The placing of the rubber cap upon the tip of the instrument after use effectually bathes that portion of the dropper in the bactericidal solution, and ensures the sterility of the only portion of the device which might come in contact with the infectious secretions of the eye.

PROGNOSIS IN INFANTILE PARALYSIS.[1]

By B. E. Wood, M.D., Boston, Mass.

At the request of the Massachusetts State Board of Health, in April, 1911, I undertook the investigation as to the present condition of those cases of infantile paralysis which were reported to the Board in the year 1907, in order to ascertain the number of recoveries occurring in the four years and thereby to increase our knowledge concerning the prognosis in this disease.

Letters were sent to all physicians who had reported cases in 1907, asking whether or not such cases had recovered and, when recovery was reported, such cases were seen personally unless they had disappeared or moved. If they could not be seen, all available information was obtained about them.

Of the 234 cases, 22 had disappeared, leaving 212 the termination of which is known; of these, 57 (27 per cent.) were reported as having recovered; 11 died in the acute stage of the disease and 8 others subsequently died of other diseases, 2 of these having recovered from the paralysis.

It was found that there were three classes of recovery: (1) Complete recovery without atrophy, (2) recovery with complete function but with some atrophy, (3) recovery with some hypertrophy of the affected limb.

The table shows the proportion of each of these:

		Per Cent.
Complete recovery without atrophy, ...	16	28.1
Functional recovery with atrophy, ...	21	36.8
Recovery with some hypertrophy, ...	3	5.3
Recovery, presence or absence of atrophy unknown, . .	17	29.8

Leaving out the last group, and averaging those in which the presence or absence of atrophy is known, shows that for every 4 recoveries without atrophy there were 5 with atrophy. When atrophy was present the maximum amount noted was as follows: —

[1] Reprinted from Boston Medical and Surgical Journal, Oct. 5, 1911.

	Inches.
Calf,	1¾
Thigh,	1¼
Arm,	½
Forearm,	¾

In most cases the atrophy was much less than this, a difference of one-eighth of an inch being counted as atrophy, but in all such cases examined function of every muscle was perfect. Three cases had only one-eighth inch atrophy of one limb; 2 cases only one-fourth inch of one limb; 5 cases only one-eighth inch of one limb and one-fourth inch of another; the other 11 cases had more than one-fourth inch atrophy. The amounts of hypertrophy recorded were in two instances one-fourth inch and in one three-eighths inch, all of the calf. One of these cases recovered in two months and has had intermittent massage up to date; one recovered in three weeks, having had daily massage for that time; one recovered in three months and had daily massage for six weeks. The duration of the treatment apparently does not account for the hypertrophy in the last two cases.

The severity of the attack in the recovered cases was classed as: —

		Per Cent.
Severe,	14	24.5
Moderate,	9	15.9
Mild,	28	49.1
Not noted,	6	
Total,	57	

The distribution of the paralysis was as follows: —

One lower extremity,	12
Both lower extremities,	9
One upper extremity,	6
Both upper extremities,	2
One lower and one upper extremity,	10
Three extremities,	7
Four extremities,	5
Face alone,	1
General,	1
Not given,	4
Total,	57

In addition to this distribution, paralysis of the face also existed in four, of the back in five, of the face and back in one, and of the abdominal muscles in one.

The time of recovery in the 57 cases was as follows: —

1 week or less,	2
1 week to 1 month,	8
1 to 2 months,	8
2 to 3 months,	5
3 months to 6 months,	10
6 months to 12 months,	9
1 to 2 years,	5
2 to 3 years,	5
No data,	5
Total,	57

To illustrate late recovery, and recovery from severe attack, two cases were especially notable.

W. H. and J. H., brothers, age eleven and thirteen, patients of Dr. J. C. Hubbard, of Holyoke, were attacked Oct. 12 and 13, 1907, respectively.

The duration of the acute attack was three weeks in each case, that of W. H. being moderate and that of J. H. severe. The latter had a temperature of 103° F. for a week, vomiting for several days and severe coma for two weeks, with marked retraction of head. The distribution of his paralysis at its worst was both thighs, left leg, left arm and left forearm and lower back. The arm and back recovered in one month.

The distribution of W. H.'s paralysis was left thigh and left leg.

The treatment was the same in both cases and consisted of massage and tabetic exercises begun in November, 1907, after the acute onset.

Both patients were in bed three weeks and had to be carried for two months and then walked with a limp, the lameness being very marked in the case of J. H. during the first year. Massage was given every night for two years. The greatest gain occurred during the second year and practical recovery occurred during the third year.

An examination in May, 1911, showed no paralysis in either case. W. H. had ⅛ inch atrophy of left calf and ½ inch of left thigh. J. H. had ⅛ inch atrophy of right calf and no atrophy of the thigh or arm.

Very little can be said as to the effect of treatment. Massage, carried out more or less irregularly in most cases, was the most common procedure, being used in 36 of the recovered cases and alone in 25, with

exercises in 5, and with baths, hot and cold, in 4. Electricity was used alone in 1 case, and with massage in 5 cases. Drugs alone were used in 12 cases, the most commonly used being strychnia and K. I. There was no treatment in 5 cases. The cases in which there was no treatment, or in which drugs alone were used, were, as a rule, those which recovered early and which did not, therefore, need other treatment.

The following conclusions seem justified: —

In anterior poliomyclitis complete recovery or functional recovery occurs in something over 25 per cent. of cases examined at the end of four years. Atrophy may exist without impairment of function. In about half of the recovered cases, the onset was mild. The distribution of the paralysis in such recovered cases was not essentially different from that in cases which do not recover. Recovery in many instances required months, and in several cases from one to three years.

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Approved by
The State Board of Publication.

WEEKLY RETURNS OF DEATHS FROM CITIES AND TOWNS OF MORE THAN 10,000 POPULATION.

WEEK ENDING OCT. 7, 1911.

CITIES AND TOWNS.	Population. Census for 1910.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM—					
				Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	670,585	189	59	56	16	19	2	2	-
Worcester,	145,986	36	10	12	5	1	1	2	-
Fall River,	119,295	35	21	19	5	1	1	-	-
Lowell,	106,294	35	13	11	2	3	-	1	-
Cambridge,	104,839	30	9	13	3	4	-	-	-
New Bedford,	96,652	20	14	5	3	2	-	-	-
Lynn,	89,336	13	3	4	2	1	1	-	-
Springfield,	88,926	20	6	7	1	2	-	1	-
Lawrence,	85,892	23	7	10	4	-	-	-	1
Somerville,	77,236	15	5	3	1	-	1	-	-
Holyoke,	57,730	12	5	3	1	2	-	-	-
Brockton,	56,878	14	2	3	2	1	-	-	-
Malden,	44,404	4	-	2	-	-	1	1	-
Haverhill,	44,115	6	-	2	-	2	-	-	-
Salem,	43,697	17	6	2	2	-	-	-	-
Newton,	39,806	8	3	2	1	-	-	-	-
Fitchburg,	37,826	11	8	1	1	-	-	-	-
Taunton,	34,259	15	3	7	2	2	-	1	-
Everett,	33,484	7	0	3	2	1	-	-	-
Quincy,	32,642	4	2	2	-	1	-	-	-
Chelsea,	32,452	6	3	1	-	-	-	-	-
Pittsfield,	32,121	8	1	3	1	-	1	-	-
Waltham,	27,834	4	1	1	-	-	-	-	-
Brookline,	27,792	7	2	2	1	1	-	-	-
Chicopee,	25,401	4	2	1	1	-	-	-	-
Gloucester,	24,398	7	1	1	-	1	-	-	-
Medford,	23,150	4	2	1	-	-	1	-	-
North Adams,	22,019	5	2	2	-	2	-	-	-
Northampton,	19,431	5	0	-	-	-	-	-	-
Beverly,	18,650	4	-	-	-	-	-	-	-
Revere,	18,219	1	-	-	-	-	-	-	-
Leominster,	17,580	3	2	-	-	-	-	-	-
Attleborough,	16,215	3	1	-	-	-	-	-	-
Westfield,	16,044	7	1	3	1	2	-	-	-
Peabody,	15,721	-	-	-	-	-	-	-	-
Melrose,	15,715	3	-	1	-	1	-	-	-
Hyde Park,	15,507	5	-	-	-	-	-	-	-
Woburn,	15,308	5	1	1	1	-	-	-	-
Newburyport,	14,949	3	1	-	-	-	-	-	-
Gardner,	14,699	3	1	1	-	-	-	-	-
Marlborough,	14,579	5	1	4	1	2	1	-	-
Clinton,	13,075	2	2	-	-	-	-	-	-
Milford,	13,055	-	-	-	-	-	-	-	-
Adams,	13,026	7	5	-	-	-	-	-	-
Framingham,	12,948	5	0	1	1	-	-	-	-
Weymouth,	12,895	-	-	-	-	-	-	-	-
Watertown,	12,875	1	0	-	-	-	-	-	-
Southbridge,	12,592	1	1	1	-	-	-	-	-
Plymouth,	12,141	-	-	-	-	-	-	-	-
Webster,	11,509	3	1	2	-	-	-	-	-
Methuen,	11,448	2	-	-	-	-	-	-	-
Wakefield,	11,404	3	-	2	2	-	-	-	-
Arlington,	11,187	1	-	-	-	-	-	-	-
Greenfield,	10,427	0	-	-	-	-	-	-	-
Winthrop,	10,132	0	-	-	-	-	-	-	-
Recapitulation.									
Total of reporting towns,	2,552,568	631	207	195	62	51	10	8	1

WEEK ENDING OCT. 14, 1911.

CITIES AND TOWNS.	Population. Census for 1910.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM— Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	670,585	189	56	61	19	12	–	2	1
Worcester,	145,986	37	4	7	2	2	3	–	–
Fall River,	119,295	30	12	15	2	4	–	–	–
Lowell,	106,294	42	11	11	7	2	–	–	–
Cambridge,	104,839	36	11	18	6	7	1	1	–
New Bedford,	96,652	18	11	3	1	1	–	–	–
Lynn,	89,336	23	4	6	4	–	1	1	–
Springfield,	88,926	21	4	6	4	–	–	1	–
Lawrence,	85,892	14	5	5	–	3	–	–	–
Somerville,	77,236	10	–	2	1	1	–	–	–
Holyoke,	57,730	10	5	1	–	1	–	–	–
Brockton,	56,878	8	1	2	1	–	–	–	–
Malden,	44,404	8	1	1	1	–	–	–	–
Haverhill,	44,115	9	3	2	1	1	–	–	–
Salem,	43,697	12	1	2	–	1	–	1	–
Newton,	39,806	5	1	1	1	–	–	–	–
Fitchburg,	37,826	9	4	1	1	–	–	–	–
Taunton,	34,259	13	2	5	3	1	–	–	–
Everett,	33,484	8	3	2	–	–	1	–	–
Quincy,	32,642	3	1	1	–	1	–	–	–
Chelsea,	32,452	17	4	6	1	2	1	1	–
Pittsfield,	32,121	9	1	1	1	–	–	–	–
Waltham,	27,834	13	3	4	2	1	–	–	–
Brookline,	27,792	7	–	–	–	–	–	–	–
Chicopee,	25,401	6	3	1	–	–	–	–	–
Gloucester,	24,398	11	–	1	–	1	–	–	–
Medford,	23,150	7	–	1	1	–	–	–	–
North Adams,	22,019	8	1	–	–	–	–	–	–
Northampton,	19,431	5	1	–	–	–	–	–	–
Beverly,	18,650	3	–	–	–	–	–	–	–
Revere,	18,219	4	–	1	1	–	–	–	–
Leominster,	17,580	3	1	2	–	1	–	–	–
Attleborough,	16,215	3	1	1	–	1	–	–	–
Westfield,	16,044	2	–	1	1	–	–	–	–
Peabody,	15,721	–	–	–	–	–	–	–	–
Melrose,	15,715	5	1	1	–	–	–	–	–
Hyde Park,	15,507	3	2	1	–	–	–	–	–
Woburn,	15,308	3	2	1	1	–	–	–	–
Newburyport,	14,949	3	2	1	1	–	–	–	–
Gardner,	14,699	1	1	–	–	–	–	–	–
Marlborough,	14,579	1	0	–	–	–	–	–	–
Clinton,	13,075	4	1	1	–	1	–	–	–
Milford,	13,055	–	–	–	–	–	–	–	–
Adams,	13,026	2	2	–	–	–	–	–	–
Framingham,	12,948	4	2	1	1	–	–	–	–
Weymouth,	12,895	–	–	–	–	–	–	–	–
Watertown,	12,875	3	2	1	1	–	–	–	–
Southbridge,	12,592	1	–	–	–	–	–	–	–
Plymouth,	12,141	–	–	–	–	–	–	–	–
Webster,	11,509	3	1	2	–	–	–	–	–
Methuen,	11,448	3	–	1	–	–	–	–	–
Wakefield,	11,404	1	–	–	–	–	–	–	–
Arlington,	11,187	1	–	–	–	–	–	–	–
Greenfield,	10,427	4	–	1	1	–	–	–	–
Winthrop,	10,132	2	–	–	–	–	–	–	–
Recapitulation.									
Total of reporting towns,	2,539,493	647	171	182	66	44	7	7	1

WEEK ENDING OCT. 21, 1911.

CITIES AND TOWNS.	Population. Census for 1910.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —					
				Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diphtheria.	Typhoid Fever	Measles.
Boston,	670,585	189	52	62	15	22	2	2	-
Worcester,	145,986	33	11	7	3	1	1	1	-
Fall River,	119,295	27	13	11	-	3	-	1	-
Lowell,	106,294	31	13	10	4	1	1	1	-
Cambridge,	104,839	26	6	8	3	2	-	-	-
New Bedford,	96,652	32	13	4	3	1	-	-	-
Lynn,	89,336	17	7	5	2	1	1	1	-
Springfield,	88,926	29	8	12	5	3	1	-	-
Lawrence,	85,892	27	8	7	3	-	-	1	-
Somerville,	77,236	12	1	4	3	1	-	-	-
Holyoke,	57,730	11	4	3	3	-	-	-	-
Brockton,	56,878	10	1	3	1	2	-	-	-
Malden,	44,404	12	3	1	-	-	-	-	-
Haverhill,	44,115	13	3	3	2	-	-	-	-
Salem,	43,697	5	-	-	-	-	-	-	-
Newton,	39,806	6	1	1	1	-	-	-	-
Fitchburg,	37,826	8	4	3	2	-	-	-	-
Taunton,	34,259	11	4	1	1	-	-	-	-
Everett,	33,484	7	1	2	1	1	-	-	-
Quincy,	32,642	5	3	-	-	-	-	-	-
Chelsea,	32,452	6	2	-	-	-	-	-	-
Pittsfield,	32,121	1	1	-	-	-	-	-	-
Waltham,	27,834	6	2	2	-	1	-	-	-
Brookline,	27,792	10	-	-	-	-	-	-	-
Chicopee,	25,401	3	1	2	-	-	-	-	-
Gloucester,	24,398	6	1	-	-	-	-	-	-
Medford,	23,150	3	1	-	-	-	-	-	-
North Adams,	22,019	4	1	1	-	-	1	-	-
Northampton,	19,431	9	2	1	1	-	-	-	-
Beverly,	18,650	3	-	2	1	-	-	1	-
Revere,	18,219	3	-	1	-	-	-	-	-
Leominster,	17,580	7	1	-	-	-	-	-	-
Attleborough,	16,215	1	1	-	-	-	-	-	-
Westfield,	16,044	-	-	-	-	-	-	-	-
Peabody,	15,721	-	-	-	-	-	-	-	-
Melrose,	15,715	4	1	-	-	-	-	-	-
Hyde Park,	15,507	4	1	-	-	-	-	-	-
Woburn,	15,308	8	3	1	-	-	-	-	-
Newburyport,	14,949	3	2	-	-	-	-	-	-
Gardner,	14,699	2	0	-	-	-	-	-	-
Marlborough,	14,579	1	0	-	-	-	-	-	-
Clinton,	13,075	4	-	-	-	-	-	-	-
Milford,	13,055	-	-	-	-	-	-	-	-
Adams,	13,026	2	1	-	-	-	-	-	-
Framingham,	12,948	2	0	1	-	-	-	1	-
Weymouth,	12,895	-	-	-	-	-	-	-	-
Watertown,	12,875	0	-	-	-	-	-	-	-
Southbridge,	12,592	0	-	-	-	-	-	-	-
Plymouth,	12,141	-	-	-	-	-	-	-	-
Webster,	11,509	3	1	-	-	-	-	-	-
Methuen,	11,448	4	2	-	-	-	-	-	-
Wakefield,	11,404	2	-	2	1	1	-	-	-
Arlington,	11,187	2	-	-	-	-	-	-	-
Greenfield,	10,427	2	1	-	-	-	-	-	-
Winthrop,	10,132	1	-	-	-	-	-	-	-
Recapitulation.									
Total of reporting towns,	2,536,524	617	181	160	55	40	7	9	-

WEEK ENDING OCT. 28, 1911.

CITIES AND TOWNS.	Population. Census for 1910.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM— Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	670,585	195	42	63	17	23	1	2	1
Worcester,	145,986	55	6	9	4	3	–	–	–
Fall River,	119,295	25	7	12	4	3	–	1	–
Lowell,	106,294	25	10	9	4	2	–	–	–
Cambridge,	104,839	14	2	5	1	1	1	–	–
New Bedford,	96,652	21	11	7	2	–	–	–	–
Lynn,	89,336	18	4	3	1	2	–	–	–
Springfield,	88,926	15	3	8	4	–	–	1	1
Lawrence,	85,892	30	13	13	3	2	1	–	–
Somerville,	77,236	15	5	3	1	1	–	–	1
Holyoke,	57,730	15	5	1	–	1	–	–	–
Brockton,	56,878	13	6	3	1	–	–	–	–
Malden,	44,404	7	1	–	–	–	–	–	–
Haverhill,	44,115	8	1	4	1	2	–	–	–
Salem,	43,697	12	3	2	1	1	–	–	–
Newton,	39,806	13	6	3	3	–	–	–	–
Fitchburg,	37,826	11	7	2	–	–	1	–	–
Taunton,	34,259	11	2	4	2	2	–	–	–
Everett,	33,484	7	2	3	2	1	–	–	–
Quincy,	32,642	6	2	1	1	–	–	–	–
Chelsea,	32,452	7	3	4	–	1	–	1	–
Pittsfield,	32,121	6	2	4	–	1	–	1	–
Waltham,	27,834	5	3	–	–	–	–	–	–
Brookline,	27,792	8	1	1	–	–	–	–	–
Chicopee,	25,401	4	1	1	1	–	–	–	–
Gloucester,	24,398	6	3	2	–	1	–	–	–
Medford,	23,150	5	–	1	–	1	–	–	–
North Adams,	22,019	5	–	1	–	–	–	–	–
Northampton,	19,431	8	0	1	–	1	–	–	–
Beverly,	18,650	4	2	–	–	–	–	–	–
Revere,	18,219	5	1	3	1	1	–	–	–
Leominster,	17,580	4	1	2	2	–	–	–	–
Attleborough,	16,215	–	–	–	–	–	–	–	–
Westfield,	16,044	3	2	–	–	–	–	–	–
Peabody,	15,721	–	–	–	–	–	–	–	–
Melrose,	15,715	1	–	–	–	–	–	–	–
Hyde Park,	15,507	2	–	–	–	–	–	–	–
Woburn,	15,308	2	0	–	–	–	–	–	–
Newburyport,	14,949	5	–	–	–	–	–	–	–
Gardner,	14,699	2	0	1	–	–	–	1	–
Marlborough,	14,579	2	0	1	–	–	1	–	–
Clinton,	13,075	3	1	1	–	1	–	–	–
Milford,	13,055	–	–	–	–	–	–	–	–
Adams,	13,026	2	1	–	–	–	–	–	–
Framingham,	12,948	1	0	–	–	–	–	–	–
Weymouth,	12,895	–	–	–	–	–	–	–	–
Watertown,	12,875	4	1	–	–	–	–	–	–
Southbridge,	12,592	2	–	–	–	–	–	–	–
Plymouth,	12,141	–	–	–	–	–	–	–	–
Webster,	11,509	2	0	–	–	–	–	–	–
Methuen,	11,448	–	–	–	–	–	–	–	–
Wakefield,	11,404	1	–	1	1	–	–	–	–
Arlington,	11,187	3	1	–	–	–	–	–	–
Greenfield,	10,427	2	–	–	–	–	–	–	–
Winthrop,	10,132	3	–	–	–	–	–	–	–
Recapitulation.									
Total of reporting towns,	2,524,905	623	161	179	57	51	5	7	3

WEEKLY RETURNS OF DEATHS FROM CERTAIN INFECTIOUS DISEASES.

Deaths from Infectious Diseases not specifically mentioned in above Tables during the Weeks of Oct. 7, 14, 21 and 28, 1911.

DISEASE.	Place.	Week ending—			
		Oct. 7.	Oct. 14.	Oct. 21.	Oct. 28.
Cerebro-spinal meningitis,	Boston,	–	1	–	1
	Cambridge,	1	–	–	–
	Chelsea,	–	–	–	1
	Lawrence,	–	–	–	2
	Lowell,	–	–	1	–
Scarlet fever,	Boston,	–	1	–	–
	Springfield,	–	–	1	–
Whooping cough,	Boston,	–	1	–	3
	Cambridge,	–	1	–	–
	Fall River,	–	–	–	1
	Fitchburg,	–	–	1	1
	Gloucester,	–	–	–	1
	Haverhill,	–	–	1	–
	Somerville,	1	–	–	–
Erysipelas,	Lowell,	–	–	1	–
	Pittsfield,	1	–	–	–
	Worcester,	–	–	1	–
Tuberculosis, other than pulmonary.	Boston,	3	5	3	–
	Brookline,	–	–	–	1
	Cambridge,	–	–	–	1
	Chelsea,	–	1	–	–
	Haverhill,	–	–	–	1
	Lawrence,	2	–	–	1
	Lowell,	1	2	1	2
	Methuen,	–	1	–	–
	Newton,	1	–	–	–
	North Adams,	–	–	–	1
	Revere,	–	–	1	–
	Springfield,	–	–	1	–
	Taunton,	–	1	–	–
	Waltham,	1	1	1	–
	Webster,	1	1	–	–
	Worcester,	–	–	–	2
Anterior poliomyelitis,	Cambridge,	1	–	–	–
	Fall River,	–	1	1	–
	Lawrence,	1	–	–	–
	New Bedford,	–	1	–	–
Meningitis other than cerebro-spinal.	Everett,	–	1	–	–

WEEKLY RETURNS OF CASES OF INFECTIOUS DISEASES.

Cases of Infectious Diseases reported during the Weeks of Oct. 7, 14, 21 and 28, 1911.

[Under the provisions of section 52 of chapter 75 of the Revised Laws.]

	Week ending—				
	Oct. 7.	Oct. 14.	Oct. 21.	Oct. 28.	Total.
Diphtheria,	136	166	161	179	642
Measles,	75	122	89	101	387
Scarlet fever,	100	91	123	124	438
Typhoid fever,	113	61	69	60	303
Tuberculosis, pulmonary,	95	128	122	148	493
Tuberculosis other than pulmonary,	–	–	–	3	3
Cerebro-spinal meningitis,	2	1	1	5	9
Meningitis other than cerebro-spinal,	1	–	–	1	2
Whooping cough,	29	29	27	49	134
Varicella,	24	22	36	52	134
Erysipelas,[1]	–	–	1	–	1
Mumps,[1]	5	19	1	1	26
Ophthalmia neonatorum,	27	53	39	38	157
Anterior poliomyelitis,	13	4	7	9	33
Tetanus,	–	1	1	1	3
Malaria,	1	–	3	1	5

[1] Erysipelas and mumps are not diseases notifiable under section 52 of chapter 75 of the Revised Laws. The figures concerning these diseases are, therefore, incomplete.

MONTHLY REPORT ON INSPECTION OF FOOD AND DRUGS.

The following summary presents the results of the examination of food and drugs made by the State Board of Health during the month of October, 1911: —

Articles examined.	Number found to be of Good Quality.	Number adulterated or varying from the Legal Standard.	Total.	Articles examined.	Number found to be of Good Quality.	Number adulterated or varying from the Legal Standard.	Total.
Butter,	2	1	3	Lard,	1	–	1
Canned fish,	1	–	1	Maple syrup,	2	5	7
Canned fruit and vegetables,	3	–	3	Meat products: —			
Cheese,	1	–	1	Beef steak,	2	–	2
Cider,	1	–	1	Head cheese,	1	–	1
Cocoa,	1	1	2	Sausages,	2	2	4
Confectionery,	1	–	1	Milk,	276	37	313
Cream,	7	–	7	Molasses,	1	–	1
Cream of tartar,	3	–	3	Olive oil,	2	1	3
Drugs,	83	10	93	Proprietary food,	3	–	3
Flavoring extracts: —				Salad dressing,	2	–	2
Lemon,	4	5	9	Spices,	3	–	3
Peppermint,	–	1	1	Syrup,	1	–	1
Vanilla,	8	–	8	Table sauce,	1	–	1
Honey,	3	–	3	Vinegar,	4	2	6
				Total,	419	65	484

The samples of drugs found to be adulterated were alcohol, camphor liniment, proprietary medicines and spirits of peppermint.

The cities and towns in which samples were collected were: Ashland, Boston, Brockton, Cambridge, Fall River, Fitchburg, Lawrence, Lee, Lowell, Lynn, Medford, Natick, New Bedford, Newburyport, Norwood, Pittsfield, Quincy, Salem, Somerville, South Framingham, Springfield, Swansea, Winchester, Woburn and Worcester.

PROSECUTIONS FOR VIOLATIONS OF THE LAW RELATING TO FOOD AND DRUGS.

Seven convictions were secured during the month of October, 1911, for selling adulterated food and drugs, as follows: —

No.	Name of Defendant.	Place.	Character of Article sold.
1	Western Egg Company, Ma Shiver, proprietor,	Boston,	Eggs (broken decomposed).
2	John C. Benz,	Pittsfield,	Milk (total solids, 9.17).[1]
3	Louis W. Cornelius,	Lenox,	Milk (total solids, 13.00).[1]
4	Morris Finkel,	Lynn,	Milk (total solids, 11.28)[1].
5	Frank Wehry,	Pittsfield,	Milk (total solids, 17.10).[1]
6	Peter Frumevin,	Brockton,	Vinegar.[1]
7	Clarence M. Gilson,	Brockton,	Vinegar (syrup).

[1] Watered.

Fines imposed, $245.

LIST OF ADULTERATED OR IMPROPERLY LABELED FOODS, ETC., FOR OCTOBER, 1911.

Number of Sample.	Character of Sample.	Name of Manufacturer, Wholesaler or Producer.	Results of Analyses.
15584	Lunch cocoa,	The Great Atlantic and Pacific Tea Co., New York,	Improperly labeled; percentage of sugar not stated.
15620	Pure extract of lemon,	Colman Specialty Co., Boston, Mass.,	Contains less than 0.1 per cent. lemon oil.
15577	Castle brand pure extract of lemon.	Simpson Bros. Co., Hyde Park, Mass.,	Contains 1.3 per cent. lemon oil.
15476	"Household" extract of lemon compound.	Highland Drug and Chemical Corporation, Boston, Mass.,	Improperly labeled; marked 2.25 per cent. lemon oil; found 0 09 per cent.
15621	Whittaker's lemon flavoring.	A. J. Whittaker, Medford, Mass.,	Improperly labeled; marked 1.20 per cent. lemon oil; found 0.06 per cent.
q 7850	Bay State brand essence of lemon.	Chas. Crompton & Sons, Manufacturing Chemists, Lynn, Mass.	Improperly labeled; marked 4.00 per cent. lemon oil; found 2.45 per cent.
9604 N	Olive oil,	I. Rokeach & Sons, Oil Refiners, Brooklyn, N. Y.,	100 per cent. cotton seed oil.
8679 R	Colonial spirits,	Berry Bros., Detroit, Michigan,	Wood alcohol; improperly labeled.
A 476	Robbins' headache powders.	McLaughlin & Dennison, Woburn, Mass.,	Contains phenacetine.
15470	Spirit of peppermint,	John J. Tobin, South Boston, Mass.,	23.1 per cent. U. S. P. strength.
15676	Spirit of peppermint,	B. F. Riddell, Fall River, Mass.,	12.6 per cent. U. S. P. strength.

INSPECTION OF DAIRIES.

During the month of October, 1911, 148 dairies were examined in the following places: —

Place.	Number examined.	Number found to present no Objectionable Features.	Per Cent.	Number concerning which Letters were sent.	Per Cent.
Acushnet,	1	–	–	1	100.00
Second inspection,	1	1	100.00	–	–
Dartmouth,	2	1	50.00	1	50.00
Freetown,	2	2	100.00	–	–
New Bedford,	47	33	70.21	14	29.79
Second inspection,	24	16	66.67	8	33.33
Third inspection,	2	–	–	2	100.00
Quincy,	1	–	–	1	100.00
Uxbridge,	13	9	69.23	4	30.77
Second inspection,	19	13	68.42	6	31.58
West Springfield,	26	20	76.92	6	23.08
Second inspection,	10	7	70.00	3	30.00

Total number of dairies examined,	148
Number found to be free from objectionable conditions,	102
Number concerning which letters were sent,	46
Total number of conditions to which attention was called,	138
Percentage of dairies which passed inspection,	68.92

In addition to the above, 84 dairies were visited at which the sale of milk had been discontinued.

The names of the owners of the dairies found to be worthy of commendation follow: —

ACUSHNET.

Class B.

Wilbur, Horatio N.*

DARTMOUTH.

Class B.

Ashley, Merton B.

FREETOWN.

Class B.

Gillan, James

Richards, Eli

* Second inspection.

New Bedford.

Class B.

Allen, Clark
Ashley, M. C.
Baylies, Charles S.
Bettincourt, Manuel
Booth, C. L.
Braley, F. J.
Brownell, William J.
Carrier, Mrs. A.
Casey, H. O.*
Codeira, Augustine
Coggeshall, Wm. A.*†
Cowles, Manuel
Devoll, Pardon
Ellis, Henry
Emmet, Ralph
Gammons, Mrs. E. H.*
Gibbs & Howard
Gifford, C. T. W.*
Gifford, William
Gill, Severn
Gonsalves, Antonio
Grew, David, Sr.*
Hagelow, George
Hammond, Emery
Hathaway, C. H.
Hawes, Mrs. Mary M.
Houle, Henry
Jasintho, Joseph*
Kenney, William*
Lawrence, Elmer H.
Lynch, W. H.
Marshall, Peter
Mastera, Frank*
Miguel, Manuel
Mitchell, David H.*†
Paleza, Mrs. S.
Peckham, Reuben B.*
Pedro, E. H.*
Rainville, Geo. D.*
Raposa, Manuel
Riendeau, D.
Russell, Edward
Russell, John A.*
Sequire, Joseph
Spooner, James L.*
Turner, W. B. & Son*
Vetorino & Lemos
White, H. O.*
Wilson, Israel J.

Uxbridge.

Class B.

Ajgopian, Kirko
Barr, Irving
Bosma, Henry
Casavant, A.*†
Chase, Elmer E.*
Crocker, Charles E.*
Davison, Wayland*†
Ellison, Walter H.*
Hall, Arthur S.*
Hamilton, Frank J.*†
Herringa, Jelle
Hollis, John E.*†
Kanansha, John
Kempton, Miss Mary E.
Landry, Angelina
Richardson, Bernard
Seagrave, August C.*†
Seagrave, Lawson D.*†
Taft, George S.*†
Uxbridge Cotton Mills*†
Vanderzight, Anke
Wiegersma, Ringer F.*

West Springfield.

Class A.

Broadhurst, W. B.

Class B.

Allen Brothers
Bagg, W. H.
Blakesley, F. R.
Brown, Charles * †
Coon, J.
Day, Miss J. M.
Denis Brothers
Duy, Philip
Fitch, Mrs. R. A.
Haas, Jacob
Hanford, C. O.
Haynes Brothers
Hubbard Brothers
Hyde, H. S.
Lee, Fred* †
Leonard, Harry P.* †
Miller, H. B.*
Moore, D. S.
Mulcahy, T. J.
Phelps, P. A.
Richardson, Estate of, W. H.
Schladenhaufer, B.*
Sheehan, M. I.
Sibley, Arthur A.
Smith, W. F. & Son
Spaulding, O. W.*

PROPRIETARY PREPARATION ADVERTISED AS UNSALABLE IN OCTOBER, 1911.

Robbins' Headache Powders. Prepared by McLaughlin & Dennison, 417 Main Street, Woburn, Mass. (No statement of presence of phenacetine.)

* Second inspection. † Reported favorably on first inspection.

THE CONTROL OF TYPHOID FEVER.[1]

Definition.

Typhoid fever is an acute febrile disease due to the invasion of the human body by a microscopic vegetable organism known as the typhoid bacillus. In this connection, however, it is important to bear in mind that feces and urine may be swarming with typhoid bacilli and yet the individual be to all intents and purposes in perfect health. Such persons are so-called "carriers" of typhoid infection and are very important in the history of the disease.

Origin of Infectious Material.

Almost without exception, the typhoid germs are taken in in food and drink which has become contaminated, by more or less devious routes, with the excretions (feces, urine or, more rarely, sputum) from a person sick with typhoid fever; from a convalescent typhoid patient; from a person who has had typhoid fever in the more or less distant past; or from a healthy person who through association with a typhoid patient has taken in the typhoid germs, and has thus become a specific carrier. About 4 per cent. of all typhoid patients become chronic carriers and may retain the specific bacilli in feces or urine for weeks, months or (in one case 50) years.

Milk contaminated by the excretions of chronic human carriers or by polluted water has been found many times as the cause of typhoid epidemics. Sewage-polluted water, and shell-fish, water cress, lettuce and other green vegetables contaminated with sewage-polluted water, have been responsible, also, for much typhoid fever. The substitution of clean for polluted water supplies has cut down most remarkably in certain cities not only the death-rate from typhoid fever, but also the general death-rate as well.

The Problem.

The problem, therefore, to be solved is that of keeping out of the food and drink of the people the excretions of those who harbor the typhoid bacillus or, at least, if such material must be ingested, it must be only after it has been so treated that the typhoid bacillus is no longer in a living state.

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[1] Prepared for the use of health authorities, physicians and laymen of the Commonwealth, by Mark W. Richardson, M.D., Secretary of the State Board of Health.

Much typhoid fever is spread, undoubtedly, by indirect contact. A typhoid nurse or typhoid carrier may not be sufficiently careful to wash the hands after soiling them with feces or urine and the infectious material is deposited later upon door knobs or other public objects, or in articles of food. The transfer of infected material from unscreened privies by flies is undoubtedly responsible for some secondary typhoid fever. The great importance of thorough hand-washing before every meal is apparent, for points of infectious contact must be numerous, especially in large cities.

The Typhoid Patient.

Typhoid fever is a slow, insidious disease, and, in most instances, a considerable period of time elapses before the patient himself or his family fully realizes that he is really sick. It is important, therefore, that the general public should be educated as to the necessity of recognizing, not only that an acute illness exists at the earliest possible moment, but also that any acute illness *may be* of a contagious nature, and that isolation of the patient should be instituted immediately on general principles.

Furthermore, the householder is required to report immediately to the local board of health a case of typhoid fever, in accordance with section 49, chapter 75, of the Revised Laws, which reads as follows: —

Revised Laws, Chapter 75, Section 49.

A householder who knows that a person in his family or house is sick of smallpox, diphtheria, scarlet fever or any other infectious or contagious disease declared by the state board of health to be dangerous to the public health [1] shall forthwith give notice thereof to the board of health of the city or town in which he dwells. Upon the death, recovery or removal of such person, the householder shall disinfect to the satisfaction of the board such rooms of his house and articles therein as, in the opinion of the board, have been exposed to infection or contagion. Should one or both eyes of an infant become inflamed, swollen and red, and show an unnatural discharge at any time within two weeks after its birth, it shall be the duty of the nurse, relative or other attendant having charge of such infant to report in writing within six hours thereafter, to the board of health of the city or town in which the parents of the infant reside, the fact that such inflammation, swelling and redness of the eyes and unnatural discharge exist. On receipt of such report, or of notice of the same symptoms given by a physician as provided by the following section, the board of health shall take such immediate action as it may deem necessary in order that blindness may be prevented. Whoever violates the provisions of this section shall be punished by a fine of not more

[1] See list of reportable diseases on page 280.

than one hundred dollars. But the board of health of a city or town may in its discretion, disinfect or fumigate all such premises as in the opinion of the board have been exposed to any infectious or contagious disease, at the expense of the city or town, and may employ any proper and competent person or corporation for the purpose of such disinfecting or fumigating.

List of Reportable Diseases.

Anterior poliomyelitis.	Smallpox.
Actinomycosis.	Tetanus.
Asiatic cholera.	Trachoma.
Cerebro-spinal meningitis.	Trichinosis.
Diphtheria.	Tuberculosis.
Glanders.	Typhoid fever.
Leprosy.	Typhus fever.
Malignant pustule.	Varicella.
Measles.	Whooping cough.
Ophthalmia neonatorum.	Yellow fever.
Scarlet fever.	

It goes without saying that a physician should be summoned at the earliest possible moment.

The Physician.

If the diagnosis of typhoid fever is clear, the physician must notify the local board of health, in accordance with section 50 of chapter 75 of the Revised Laws, which reads as follows: —

Revised Laws, Chapter 75, Section 50.

If a physician knows that a person whom he is called to visit is infected with smallpox, diphtheria, scarlet fever or any other disease declared by the state board of health to be dangerous to the public health,[1] or if one or both eyes of an infant whom or whose mother he is called to visit become inflamed, swollen and red, and show an unnatural discharge within two weeks after the birth of such infant, he shall immediately give notice thereof in writing over his own signature to the selectmen or board of health of the town: and if he refuses or neglects to give such notice, he shall forfeit not less than fifty nor more than two hundred dollars for each offence.

If the diagnosis is not clear, the attending physician should bring to his aid the facilities offered by the laboratories of the local and the State boards of health. The State Board of Health will examine, free of charge, the blood for the agglutination (Widal) test, or the blood, feces and urine for the typhoid bacillus. Outfits, with instructions for their proper use, may be obtained from local boards of health, or from the State Board of Health, 144 State House, Boston, Mass. Meanwhile, the

[1] See above list of reportable diseases.

case should be notified to the local board of health as being one possibly of typhoid fever. The simultaneous notification of a considerable number of doubtful cases in any locality would in itself be of the greatest value in revealing the presence of any epidemic disease. It would not seem necessary, however, that such doubtful cases be notified to the State Board of Health until further investigation had proved them to be certainly cases of true typhoid fever. Such doubtful cases should be cared for with all due typhoid precautions until their true status is settled.

Local Boards of Health.

Local boards of health must keep records of all reported cases and must give immediate information to the school committee, in accordance with section 51 of chapter 75 of the Revised Laws, which reads as follows: —

Revised Laws, Chapter 75, Section 51.

The board of health shall keep a record, in blank books to be provided by the secretary of the commonwealth, of all reports received pursuant to the two preceding sections, which shall contain the name and location of all persons who are sick, their disease, the name of the person who reports the case and the date of such report. Said board shall give immediate information to the school committee of all contagious diseases so reported to them.

The local board of health must, furthermore, notify the State Board of Health within twenty-four hours of any case reported as typhoid fever, in accordance with section 52 of chapter 75 of the Revised Laws, which reads as follows: —

Revised Laws, Chapter 75, Section 52.

If the board of health of a city or town has had notice of a case of smallpox, diphtheria, scarlet fever or of any other disease declared by the state board of health to be dangerous to the public health [1] therein, it shall within twenty-four hours thereafter give notice thereof to the state board of health stating the name and the location of the patient so afflicted, and the secretary thereof shall forthwith transmit a copy of such notice to the state board of charity.

Every case of typhoid fever should be investigated within twenty-four hours by a member of the board of health or by its accredited agent, who should make a thorough investigation as to the possible way in which the infection was acquired. Special attention should be paid to sources of water and food supplies. The possible relation of contaminated milk should be particularly inquired into. Contact with previously existing cases may be of special importance.

[1] See list of reportable diseases on page 280.

For the better control of this disease it is essential that the State Board of Health should know the facts concerning each case at the earliest possible moment. Local boards of health are urged, therefore, to record such facts on blanks provided for the purpose and to forward them without delay to the State Board of Health.

The following measures for the protection of the family and the public should be insisted upon: —

Typhoid fever is not a disease which shows great contagiousness. It is not necessary, therefore, to insist upon the strictest of quarantine. Isolation of the individual patient properly carried out is all that is necessary. The infecting germs are contained in the excretions, the stools, the urine and the sputum, and if these are properly disinfected there can be no further spread of the disease. In the first place, urinary disinfectants should be given internally to the patient himself, for it has been found that, in about 25 per cent. of all typhoid cases, the urine becomes infected with the typhoid bacillus, an infection which is important from two points of view. It may set up an inflammation of the genito-urinary passages (pyelitis, cystitis, orchitis) or it may, through lack of disinfection of the urine after it leaves the body, become an important factor in the further spread of the disease to those in the immediate neighborhood of the patient. Experience has shown that hexamethylenamin acts strongly as an internal urinary antiseptic, especially if the drug be used at an early stage of the disease, before acute inflammation of the mucous membranes of the urinary tract has been set up. Hexamethylenamin, therefore, should be given as a routine measure in all cases of typhoid fever in doses of five grains, three times daily. In rare instances the use of this drug may be followed by painful micturition and hæmaturia. In such cases, of course, the drug must be omitted. There is no record of any permanent injury having been done by the drug.

As regards the stools, urine and sputum, the following disinfectants are recommended.

Milk of lime, (one part freshly slaked lime to eight parts of water), or chlorinated lime (6%), or carbolic acid (5%), or formalin (10%), or boiling in soda solution. The discharges should be received in a vessel containing some of the germicidal solution, and more should be added so as to cover the mass and be equal to at least twice the volume of the material to be disinfected. The entire contents of the vessel should then be thoroughly stirred, special care being taken to disintegrate lumps. The vessel should be covered and allowed to stand not less than one hour before the contents are discarded.

The sick room should be screened.

Only persons actually required for the care of the patient should be allowed in the room.

All linen which has been in contact with the patient or soiled by him should be either soaked in carbolic acid, 5 per cent., or boiled.

The eating utensils of the patient should be marked, and used by no one else.

Bath water should be sterilized by the addition of 5 per cent. carbolic acid, or by boiling.

Milk receptacles from an infected house should not be returned to the dealer unless thoroughly scalded. A better plan is for the dealer to pour the milk into a receptacle supplied by the family.

Privies should be screened and should be water tight, and should be cleaned only under official supervision.

If the family is engaged in the milk business or any other connected with foodstuffs, it may be necessary in the interest of public health to suspend such business until the possibility of contamination is thoroughly eliminated. These precautions (isolation, disinfection or hexamethylenamin) should be practiced in all cases for two weeks, at least, after the temperature has become normal, and no person should be allowed to resume his usual vocation until two consecutive negative examinations have been made of the stools and urine. If the patient's business brings him in contact with food products, four consecutive negative examinations of the stools and urine should be required.

In case a person is found to be, in spite of all treatment, a chronic carrier of typhoid bacilli, he should be kept under competent supervision by the local board of health: he should not be allowed to engage in occupations requiring the handling of foodstuffs, and in case he moves to another neighborhood the local health authorities of that neighborhood should be notified at once.

As previously stated, such examinations will be made free of charge by the State Board of Health.

Cases which cannot be properly cared for at home should be removed, if possible, to the hospital.

Anti-Typhoid Inoculation.

The use of typhoid vaccines for the prevention of typhoid fever has passed beyond the experimental stage. The results obtained by the medical department of the United States Army during the recent mobilization of troops in Texas have been very remarkable, and these results have been duplicated on a smaller scale by the writer and Spooner in

training schools for nurses in Massachusetts. The amount of inconvenience suffered by the person inoculated is minimal and the procedure is to be highly commended. Anti-typhoid inoculation will be taken up, naturally, in the first instance by physicians, nurses and ward tenders, who are especially exposed to infection. But, in view of the fact that no one can tell beforehand when he may be exposed to the influence of a polluted milk or water supply, anti-typhoid inoculation should be recommended to the public at large, and especially in the presence of an epidemic. The vaccines may be obtained ready for use from a number of the larger manufacturing druggists.

Disinfection of Sick Room.

After the recovery of the patient, or his death, the sick room should be —

A. Thrown open and exposed to a maximum influence of sunshine and fresh air.

B. All linen, blankets, curtains, etc., should be soaked in carbolic acid, 5 per cent., or boiled.

C. All flat surfaces should be wiped with carbolic acid 5 per cent., formalin 10 per cent., or (non-metallic surfaces) corrosive sublimate 1 to 1,000.

D. The disinfection of the room with formaldehyde gas. The best method of generating this gas is that of Evans and Russell, which depends upon the fact that when formalin and potassium permanganate are brought together a violent reaction occurs, with the evolution of much heat, rapid liberation of gas and also vaporization of the water. For the best results, 6.5 ounces of permanganate in the form of powder or very small crystals should be employed with each pint of formalin for every 1,000 cubic feet of space. On account of the frothing which occurs in consequence of the violence of the reaction, very tall vessels are required for this method of disinfection. These vessels are best made of tin, with flaring tops, and they should have a diameter of ten inches at the bottom and a height of seventeen inches, the sides having a perpendicular height of eight inches and then flaring at an angle of about 50°.

For the success of the procedure it is, of course, necessary that all cracks, keyholes, windows, registers, fireplaces, stoves, etc., should be tightly closed. In any given case, the necessary amount of each ingredient having been determined, the permanganate is placed in the vessel and the formalin is poured upon it. The evolution of the gas being very rapid, it is necessary for the operator to leave the room as quickly

as possible. The room is then left unopened for about twelve hours. At the end of this time, the room should be thoroughly aired by opening all doors and windows. In doing this, however, the operator should protect his eyes by closely fitting goggles and should hold his breath until his object is accomplished.

The State Board of Health.

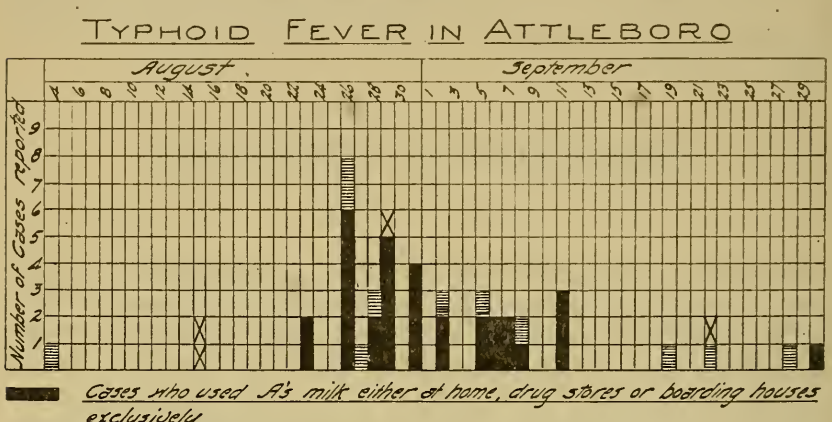
The State Board of Health through its State inspectors of health and its bacteriological and chemical departments, stands ready to assist in all possible ways local boards of health, in tracing out and dealing with typhoid epidemics.

TYPHOID FEVER IN ATTLEBOROUGH.

On August 4, 1911, after several months of freedom from typhoid fever, a case of that disease occurred in Attleborough, followed on August 15 by 2 cases, on August 23 by 2 more and on August 26 by 8. While the height of the outbreak was reached on this date, 1 case of the disease occurred on the 27th, 3 on the 28th, 5 on the 29th, and 4 on the 31st of August. Gradually diminishing, the cases reported in September were: 3 on the 2d and 5th, 2 on the 6th, 7th and 8th, 3 on the 11th, and 1 on the 19th, 2 on the 22d, and 1 each on the 28th and 30th. In addition to these 46 cases which occurred during August and September, 1 person who was reported ill with the disease was found to have contracted it while out of town. Careful investigation showed that this case was in no way connected with the outbreak.

The sudden outbreak of cases occurring in a town for years practically free from the disease and for some months without a case, and the widespread distribution of the cases, pointed to a common source of infection and to the probability of a common milk supply as the source of infection. An investigation was made of the milk supply of the cases, therefore, by the State Inspector of Health of the district including Attleborough, Dr. Elliott Washburn, who found that all the patients but one, who was in Attleborough but two days and was ill when he arrived, obtained milk from one or more of 13 dealers. He found, further, that 31 patients used milk that was supplied only by Dealer A., either in the home, boarding place, or drug store. In this connection, it is worthy of note that the clerk who dispensed milk shakes and other milk drinks in a drug store was himself stricken with the disease. Of the 15 patients

so far unconsidered, 11 used milk from A.'s supply in addition to milk from the supply of other dealers. Of the remaining 4 cases, 1 patient used milk direct from Dealer J., who supplied A. with milk; 3 patients used milk exclusively from other dealers. The diagnosis in one instance was found to be erroneous. The facts, therefore, showed that of the 46 persons who were stricken with typhoid fever during the months of August and September, 43 used milk which came directly or indirectly from one dealer's (A.'s) milk supply.


TYPHOID FEVER IN ATTLEBORO
August
September
Number of Cases reported
Cases who used A's milk either at home, drug stores or boarding houses exclusively
Cases who used more or less of A's milk in addition to that of other dealers
Cases on other milk routes who used none of A's milk

Investigation disclosed the fact that during the months of July and August Dealer A. obtained his supply from seven producers, who brought their milk to his station in Attleborough, where it was mixed and alleged to be pasteurized, then cooled and bottled. The empty cans were said to be washed, sterilized by steam, dried and returned to the producers. The work incident to these processes was done by A. and one assistant. A portion of the building was used as a wet wash laundry, which opened by a large door directly into the room in which the bottling was done. It was asserted that no laundry employee handled the milk in any way, and that the door connecting the rooms was usually closed. Neither Dealer A. nor his assistant had recently been ill. Nor had there been recently a case of typhoid fever in the home of either. Moreover, neither had ever had the disease. The sanitary conditions at the milk station were worthy of commendation. On the other hand, while the examination of the premises of six of Dealer A.'s producers disclosed unsanitary conditions in two instances, no presence of typhoid fever or other com-

municable disease could be discovered. At the home of the seventh producer, however, — Producer J., of Rehoboth, — it was found that his daughter, Mrs. B., was ill in bed and that she had been ill for more than four weeks, and that the attending physician, on August 4, obtained a positive Widal test. On consulting the physician, he stated that he notified the local board of health on August 4. According to the local board of health, however, no notice of Mrs. B.'s illness was received until the case was brought to their attention on August 26 by the State Inspector of Health. It was further discovered that Producer J.'s household consisted of himself, his wife, Mrs. B., the patient, and a woman helper. According to the statement of Producer J., the entire handling of the milk was done by himself, including the milking, washing the milking pails, and putting the milk into the cans. It appeared to the State Inspector of Health, however, that owing to the manner of the disposal of the patient's stools and the fact that there were ample opportunities for contact infection, the milk supply might easily have become infected. The explanation of the fact that a number of cases occurred later than the close of the usual incubation period for typhoid fever is probably due to the known delay on the part of physicians in reporting to the local board of health rather than to contact infection. The State Inspector of Health found, further, that the water used by Producer J. for all milk purposes was supplied by a well about twenty-five feet deep, situated fifty feet from the premises and twenty-five feet from the spot of ground whereon sink waste material has been discharged for many years. An analysis made by the State Board of Health of a sample of the water from this well, taken on September 3, showed it to be badly polluted. The water had been used for washing the milk pails.

Thus it appears that there were two possible sources of infecting Producer J.'s milk, which reached 43 of the 46 persons stricken, through (1) the case of typhoid fever in his own home, and (2) the badly polluted well water which was used for washing milk pails.

The practical conclusion concerning this outbreak is that a more careful supervision of the farms supplying milk for public sale is imperative. While, under the most efficient supervision, there will be milk-borne typhoid outbreaks which cannot be traced to any antecedent case on the farm because of persons who are unconscious carriers and disseminators of the typhoid bacillus, with suitable State supervision of milk production such outbreaks as this one might be prevented.

The ideal protection of milk supplies would include a thorough examination of every person who handles the milk in any way, as well as frequent examinations of the farm water supply and of the nearness of privy vaults to country wells.

RULES FOR POLICE STATIONHOUSES, LOCK-UPS AND HOUSES OF DETENTION.

In accordance with the provisions of chapter 405 of the Acts of 1910, the State Board of Health made the following rules relative to police stationhouses, lock-ups and houses of detention in the State, and sent a copy thereof to the mayor of every city and to the selectmen of the towns to which the rules apply: —

General Rules applicable to all Police Stations, Lock-ups and Houses of Detention.

1. *As to Furnishing and Use of Drinking Cups.* — Attention is called to the use of the common drinking cup in accordance with the provisions of chapter 428 of the Acts of 1910. A drinking cup after use by one person should be washed clean before being used by another.

2. *As to Dishes used for Food.* — All dishes and utensils used for food should be thoroughly cleaned and washed in boiling water after use.

3. *As to Bedding.* — Every woman prisoner should be furnished with a mattress. The mattress should have a smooth surface and be covered with rubber or other water proof material. This should be encased in a slip of washable material or covered with a sheet. These slips or sheets should be changed for each occupant and washed. Both mattresses and coverings should be removed from the cells during the day and thoroughly aired.

4. *As to Ventilation.* — All cells should be adequately ventilated. (Cells ventilated by means of openings into ventilating flues must have some means, mechanical or other, for creating a circulation of air.)

Rules applicable to a Single Stationhouse.

Avon. — The ventilation and sanitation of the lock-up is so inadequate as to make it unsuitable for use. A change in location or new building is recommended.

Becket. — The present building should be improved by putting in a new floor, additional windows, a ventilator, and proper toilet facilities.

Blackstone. — The basement location of the lock-up makes it unsuitable for use. A change in location or new building is recommended.

Brockton. — The ventilation of the police station is so inadequate as to make the station unsuitable for use in its present condition.

Canton. — The basement location of the lock-up makes it unsuitable for use. A change in location or new building is recommended.

Chicopee Falls. — The present location of the police stationhouse and the unsanitary and inadequate provisions make the cells unsuitable for use. A change in location or new building is recommended.

Cheshire. — The basement location, inadequate ventilation, light and sanitation make the lock-up unsuitable for use. A change in location or new building is recommended.

Dover. — The underground basement location, inadequate ventilation, light and sanitation make the lock-up unsuitable for use. A change in location or new building is recommended.

East Weymouth. — The basement location, inadequate ventilation, light and sanitation make the lock-up unsuitable for use. A change in location or new building is recommended.

Franklin. — The basement location, inadequate ventilation, light and sanitation make the lock-up unsuitable for use. A change in location or new building is recommended.

Georgetown. — The damp location and inadequate ventilation, light and sanitation of the cells and the filthy condition of the bedding make the lock-up unsuitable for use. A change in location or new building is recommended.

Grafton. — The basement location, inadequate ventilation, light and sanitation make the lock-up unsuitable for use. A change in location or new building is recommended.

Groton. — The basement location, the inadequate ventilation, light and sanitation of the lock-up make it unsuitable for use. A change in location is recommended.

Holbrook. — The basement location of the lock-up, inadequate ventilation, light and sanitation of the building make its use unsuitable. A change in location or new building is recommended.

Holyoke. — The damp location of the cells in the police station, the inadequate ventilation, light and sanitation — including defective disposal of sewage — make this lock-up unsuitable for use. A change in location or new building is recommended.

Mansfield. — The basement location of the lock-up, inadequate ventilation, light and sanitation of the building make it unsuitable for use. A change in location or new building is recommended.

Mendon. — The inadequate ventilation, light and sanitation of the cells in the lock-up make the building unsuitable for use in its present condition.

Middleborough. — Owing to the basement location of the lock-up, the inadequate ventilation, light and sanitation of the cells, the building is unsuitable for use as a lock-up in its present condition.

North Adams. — The inadequate light, ventilation and sanitation of the police station make it unsuitable for use in its present condition.

North Attleborough. — The basement location of the lock-up, the inadequate ventilation, light and sanitation of the building make it unsuitable for use. A change in location or new building is recommended.

North Billerica. — The inadequate ventilation, light and sanitation of the lock-up make it unsuitable for use in its present condition.

Northbridge. — The basement location and the inadequate ventilation and light of the lock-up make it unsuitable for use. A change in location or new building is recommended.

Northborough. — The basement and damp location and the inadequate ventilation, light and sanitation of the lock-up make it unsuitable for use. A change in location or new building is recommended.

North Brookfield. — The basement and damp location, the inadequate ventilation, light and sanitation of the lock-up make it unsuitable for use. A change in location or new building is recommended.

Northampton. — The inadequate ventilation, light and sanitation of the lock-up make it unsuitable for use in its present condition.

Oxford. — The basement and somewhat damp location of the lock-up, the inadequate ventilation and the lack of proper sewerage facilities make the lock-up unsuitable for use in its present condition.

Palmer. — The basement and damp location and inadequate ventilation and light of the lock-up make it unsuitable for use. A change in location or a new building is recommended.

Plymouth. — The basement and damp location of the lock-up and the inadequate ventilation of the building make it unsuitable for use. A change in location or new building is recommended.

Randolph. — The inadequate ventilation and sanitation of the lock-up make it unsuitable for use in its present condition.

Salem. — The damp location of the police station and the inadequate ventilation, light and sanitation of the building make it unsuitable for use. A change in location or new building is recommended.

Sharon. — The basement location of the lock-up and the inadequate ventilation and lighting of the building make it unsuitable for use. A change in location or new building is recommended.

Sheffield. — The basement and damp location and the inadequate ventilation, light and sanitation of the lock-up make it unsuitable for use. A change in location or a new building is recommended.

Shelburne Falls. — The basement location and the inadequate ventilation, light and sanitation of the lock-up make it unsuitable for use. A change in location or new building is recommended.

Southbridge. — The damp location, the inadequate ventilation, light and sanitation of the lock-up make it unsuitable for use. A change in location or a new building is recommended.

Spencer. — There should be installed in the lock-up proper toilets connected with the sewer.

Sudbury. — The inadequate ventilation, light and sanitation of the lock-up make it unsuitable for use in its present condition.

Uxbridge. — The basement and damp location and the inadequate ventilation, light and sanitation of the lock-up make it unsuitable for use. A change in location or a new building is recommended.

Walpole. — The basement location of the lock-up and the inadequate ventilation and the light of the building make it unsuitable for use. A change in location or a new building is recommended.

Wayland. — The basement and damp location of the lock-up and the inade-

quate ventilation and light make the building unsuitable for use. A change in location or a new building is recommended.

Webster. — The lock-up is inadequately ventilated. It is suggested that in order to provide adequate ventilation the windows should be enlarged to twice their present size.

Westfield. — The basement and damp location, the inadequate ventilation and light of the cells make them unsuitable for use. A change in location or a new building is recommended.

Williamsburg. — The basement and damp location, and the inadequate ventilation, light and sanitation of the lock-up make it unsuitable for use. A change in location or a new building is recommended.

Williamstown. — The damp location and the inadequate ventilation, light and sanitation of the lock-up make it unsuitable for use. A change in location or a new building is recommended.

Worcester. — Station 1. The damp location of the police station and inadequate ventilation and lighting of the cells make them unsuitable for use. A change in location or new building is recommended.

Wrentham. — The location of the lock-up and the inadequate ventilation and lighting make it unsuitable for use. A change in location or a new building is recommended.

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Approved by
The State Board of Publication.

WEEKLY RETURNS OF DEATHS FROM CITIES AND TOWNS OF MORE THAN 10,000 POPULATION.

WEEK ENDING NOV. 4, 1911.

CITIES AND TOWNS.	Population. Census for 1910.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM— Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	670,585	174	33	50	13	21	2	–	1
Worcester,	145,986	30	2	5	1	3	1	–	–
Fall River,	119,295	40	15	18	5	2	–	–	–
Lowell,	106,294	30	12	5	3	1	–	–	–
Cambridge,	104,839	20	5	6	3	3	–	–	–
New Bedford,	96,652	32	8	15	2	6	2	1	–
Lynn,	89,336	11	2	1	1	–	–	–	–
Springfield,	88,926	21	1	6	3	2	–	1	–
Lawrence,	85,892	27	8	12	2	5	1	–	–
Somerville,	77,236	10	–	3	1	1	–	–	–
Holyoke,	57,730	23	12	6	3	2	1	–	–
Brockton,	56,878	15	4	6	1	4	–	–	–
Malden,	44,404	11	–	1	–	–	–	–	–
Haverhill,	44,115	13	2	4	2	1	–	1	–
Salem,	43,697	9	3	–	–	–	–	–	–
Newton,	39,806	7	1	2	–	1	1	–	–
Fitchburg,	37,826	5	–	–	–	–	–	–	–
Taunton,	34,259	14	3	3	3	–	–	–	–
Everett,	33,484	8	1	1	–	1	–	–	–
Quincy,	32,642	10	2	2	–	2	–	–	–
Chelsea,	32,452	9	0	2	2	–	–	–	–
Pittsfield,	32,121	9	–	1	–	1	–	–	–
Waltham,	27,834	1	0	1	–	1	–	–	–
Brookline,	27,792	6	1	–	–	–	–	–	–
Chicopee,	25,401	10	4	5	3	1	–	–	–
Gloucester,	24,398	6	–	1	–	1	–	–	–
Medford,	23,150	2	1	2	–	2	–	–	–
North Adams,	22,019	7	1	2	–	1	–	–	–
Northampton,	19,431	5	1	2	1	1	–	–	–
Beverly,	18,650	7	–	–	–	–	–	–	–
Revere,	18,219	4	1	2	1	1	–	–	–
Leominster,	17,580	2	–	1	1	–	–	–	–
Attleborough,	16,215	2	0	1	–	–	–	–	–
Westfield,	16,044	3	–	1	–	1	–	–	–
Peabody,	15,721	–	–	–	–	–	–	–	–
Melrose,	15,715	1	–	–	–	–	–	–	–
Hyde Park,	15,507	2	–	–	–	–	–	–	–
Woburn,	15,308	4	1	2	2	–	–	–	–
Newburyport,	14,949	4	–	1	1	–	–	–	–
Gardner,	14,699	2	–	1	–	1	–	–	–
Marlborough,	14,579	6	0	–	–	–	–	–	–
Clinton,	13,075	1	–	1	–	1	–	–	–
Milford,	13,055	5	1	2	–	1	–	–	–
Adams,	13,026	2	2	1	–	–	–	–	–
Framingham,	12,948	3	0	–	–	–	–	–	–
Weymouth,	12,895	–	–	–	–	–	–	–	–
Watertown,	12,875	2	0	–	–	–	–	–	–
Southbridge,	12,592	0	–	–	–	–	–	–	–
Plymouth,	12,141	–	–	–	–	–	–	–	–
Webster,	11,509	3	1	–	–	–	–	–	–
Methuen,	11,448	1	0	–	–	–	–	–	–
Wakefield,	11,404	3	–	2	2	–	–	–	–
Arlington,	11,187	5	–	3	1	2	–	–	–
Greenfield,	10,427	4	2	–	–	–	–	–	–
Winthrop,	10,132	1	–	–	–	–	–	–	–
Recapitulation.									
Total of reporting towns,	2,565,623	632	130	180	57	70	8	3	1

WEEK ENDING NOV. 11, 1911

CITIES AND TOWNS.	Population. Census for 1910.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —					
				Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	670,585	203	52	72	30	18	2	3	4
Worcester,	145,986	42	5	14	9	4	1	–	–
Fall River,	119,295	27	12	12	4	1	1	1	–
Lowell,	106,294	32	7	10	5	3	1	–	–
Cambridge,	104,839	34	5	9	2	4	–	–	–
New Bedford,	96,652	28	10	9	4	–	–	1	–
Lynn,	89,336	17	4	4	2	2	–	–	–
Springfield,	88,926	21	4	7	4	2	–	–	1
Lawrence,	85,892	23	4	5	2	–	–	1	–
Somerville,	77,236	20	2	1	–	1	–	–	–
Holyoke,	57,730	9	4	2	1	–	1	–	–
Brockton,	56,878	10	2	1	1	–	–	–	–
Malden,	44,404	7	1	1	–	1	–	–	–
Haverhill,	44,115	12	2	3	3	–	–	–	–
Salem,	43,697	14	3	–	–	–	–	–	–
Newton,	39,806	13	4	1	–	1	–	–	–
Fitchburg,	37,826	12	3	3	3	–	–	–	–
Taunton,	34,259	13	5	6	1	1	–	1	–
Everett,	33,484	8	1	3	–	2	–	–	–
Quincy,	32,642	4	1	–	–	–	–	–	–
Chelsea,	32,452	9	1	2	1	1	–	–	–
Pittsfield,	32,121	11	2	2	–	–	1	–	–
Waltham,	27,834	3	0	1	1	–	–	–	–
Brookline,	27,792	3	–	–	–	–	–	–	–
Chicopee,	25,401	11	5	3	1	1	–	–	–
Gloucester,	24,398	4	2	1	–	–	1	–	–
Medford,	23,150	3	–	1	1	–	–	–	–
North Adams,	22,019	8	2	2	1	–	–	1	–
Northampton,	19,431	6	1	1	–	–	–	1	–
Beverly,	18,650	7	1	–	–	–	–	–	–
Revere,	18,219	4	–	–	–	–	–	–	–
Leominster,	17,580	4	2	1	–	1	–	–	–
Attleborough,	16,215	5	1	1	–	–	–	–	–
Westfield,	16,044	4	1	1	–	1	–	–	–
Peabody,	15,721	–	–	–	–	–	–	–	–
Melrose,	15,715	1	–	–	–	–	–	–	–
Hyde Park,	15,507	3	1	–	–	–	–	–	–
Woburn,	15,308	4	0	2	2	–	–	–	–
Newburyport,	14,949	5	–	–	–	–	–	–	–
Gardner,	14,699	5	0	–	–	–	–	–	–
Marlborough,	14,579	3	1	–	–	–	–	–	–
Clinton,	13,075	1	–	–	–	–	–	–	–
Milford,	13,055	5	0	1	1	–	–	–	–
Adams,	13,026	1	1	–	–	–	–	–	–
Framingham,	12,948	4	3	–	–	–	–	–	–
Weymouth,	12,895	–	–	–	–	–	–	–	–
Watertown,	12,875	2	0	–	–	–	–	–	–
Southbridge,	12,592	1	1	–	–	–	–	–	–
Plymouth,	12,141	–	–	–	–	–	–	–	–
Webster,	11,509	2	1	1	1	–	–	–	–
Methuen,	11,448	4	1	1	–	–	–	–	–
Wakefield,	11,404	0	–	–	–	–	–	–	–
Arlington,	11,187	6	–	1	–	1	–	–	–
Greenfield,	10,427	1	–	–	–	–	–	–	–
Winthrop,	10,132	6	–	–	–	–	–	–	–

Recapitulation.

Total of reporting towns,	2,565,623	685	158	185	80	45	8	9	5

WEEK ENDING NOV. 18, 1911.

CITIES AND TOWNS.	Population. Census for 1910.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM—					
				Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	670,585	185	53	35	20	15	3	3	1
Worcester,	145,986	28	4	8	3	4	–	1	–
Fall River,	119,295	34	16	13	6	1	–	1	–
Lowell,	106,294	37	10	7	3	1	–	1	–
Cambridge,	104,839	36	9	10	4	3	2	–	–
New Bedford,	96,652	26	11	6	3	1	–	1	–
Lynn,	89,336	24	3	5	1	4	–	–	–
Springfield,	88,926	19	5	3	2	–	–	–	–
Lawrence,	85,892	20	4	5	3	1	–	–	–
Somerville,	77,236	8	–	–	–	–	–	–	–
Holyoke,	57,730	10	2	3	2	–	–	1	–
Brockton,	56,878	12	2	6	3	3	–	–	–
Malden,	44,404	9	3	3	1	–	2	–	–
Haverhill,	44,115	14	5	5	4	–	–	–	–
Salem,	43,697	15	2	2	–	1	–	–	–
Newton,	39,806	11	1	2	2	–	–	–	–
Fitchburg,	37,826	10	2	2	–	2	–	–	–
Taunton,	34,259	7	3	3	1	–	–	1	–
Everett,	33,484	10	3	–	–	–	–	–	–
Quincy,	32,642	5	1	–	–	–	–	–	–
Chelsea,	32,452	11	1	1	–	1	–	–	–
Pittsfield,	32,121	10	4	2	–	–	–	–	–
Waltham,	27,834	7	1	1	–	–	–	–	–
Brookline,	27,792	2	1	1	1	–	–	–	–
Chicopee,	25,401	3	2	3	1	–	–	–	–
Gloucester,	24,398	7	–	1	–	1	–	–	–
Medford,	23,150	6	–	3	1	1	1	–	–
North Adams,	22,019	7	1	2	1	–	–	1	–
Northampton,	19,431	8	0	1	–	1	–	–	–
Beverly,	18,650	5	1	2	–	–	–	2	–
Revere,	18,219	2	2	–	–	–	–	–	–
Leominster,	17,580	6	1	1	1	–	–	–	–
Attleborough,	16,215	4	2	–	–	–	–	–	–
Westfield,	16,044	7	3	1	–	1	–	–	–
Peabody,	15,721	–	–	–	–	–	–	–	–
Melrose,	15,715	5	–	1	1	–	–	–	–
Hyde Park,	15,507	3	1	1	–	1	–	–	–
Woburn,	15,308	2	1	2	–	1	–	–	–
Newburyport,	14,949	7	1	3	1	1	–	–	–
Gardner,	14,699	5	2	1	1	–	–	–	–
Marlborough,	14,579	1	1	1	1	–	–	–	–
Clinton,	13,075	1	–	–	–	–	–	–	–
Milford,	13,055	3	1	–	–	–	–	–	–
Adams,	13,026	3	2	–	–	–	–	–	–
Framingham,	12,948	4	1	1	–	1	–	–	–
Weymouth,	12,895	–	–	–	–	–	–	–	–
Watertown,	12,875	4	1	–	–	–	–	–	–
Southbridge,	12,592	1	–	–	–	–	–	–	–
Plymouth,	12,141	–	–	–	–	–	–	–	–
Webster,	11,509	3	1	2	1	1	–	–	–
Methuen,	11,448	1	–	–	–	–	–	–	–
Wakefield,	11,404	1	–	–	–	–	–	–	–
Arlington,	11,187	5	0	1	–	1	–	–	–
Greenfield,	10,427	6	1	2	1	1	–	–	–
Winthrop,	10,132	1	–	–	–	–	–	–	–

Recapitulation.

Total of reporting towns,	2,565,623	661	171	172	69	48	8	12	1

WEEK ENDING NOV. 25, 1911.

CITIES AND TOWNS.	Population. Census for 1910.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM—					
				Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	670,585	168	37	54	25	15	1	2	–
Worcester,	145,986	44	13	12	6	5	–	–	–
Fall River,	119,295	29	9	6	–	–	–	–	–
Lowell,	106,294	32	10	12	5	5	1	–	–
Cambridge,	104,839	36	10	9	4	2	3	–	–
New Bedford,	96,652	22	8	10	7	1	–	–	–
Lynn,	89,336	13	1	3	2	1	–	–	–
Springfield,	88,926	20	3	1	–	–	–	1	–
Lawrence,	85,892	22	4	6	2	2	–	–	–
Somerville,	77,236	18	1	6	3	2	–	–	–
Holyoke,	57,730	16	5	6	4	1	–	1	–
Brockton,	56,878	6	1	2	–	2	–	–	–
Malden,	44,404	11	4	1	1	–	–	–	–
Haverhill,	44,115	12	3	2	1	1	–	–	–
Salem,	43,697	13	5	6	4	–	1	–	–
Newton,	39,806	8	1	1	1	–	–	–	–
Fitchburg,	37,826	6	2	4	2	1	1	–	–
Taunton,	34,259	10	4	4	2	–	–	–	–
Everett,	33,484	5	1	2	–	–	1	1	–
Quincy,	32,642	10	4	3	–	3	–	–	–
Chelsea,	32,452	5	1	–	–	–	–	–	–
Pittsfield,	32,121	10	2	1	1	–	–	–	–
Waltham,	27,834	8	3	2	–	1	–	–	1
Brookline,	27,792	8	–	2	2	–	–	–	–
Chicopee,	25,401	7	1	3	–	2	–	–	–
Gloucester,	24,398	3	–	–	–	–	–	–	–
Medford,	23,150	6	1	1	1	–	–	–	–
North Adams,	22,019	8	1	2	1	–	–	–	–
Northampton,	19,431	5	2	2	1	–	1	–	–
Beverly,	18,650	9	1	2	1	1	–	–	–
Revere,	18,219	4	2	2	1	1	–	–	–
Leominster,	17,580	5	–	1	–	–	–	–	1
Attleborough,	16,215	4	1	1	–	–	–	–	–
Westfield,	16,044	7	–	2	–	2	–	–	–
Peabody,	15,721	–	–	–	–	–	–	–	–
Melrose,	15,715	2	1	1	–	1	–	–	–
Hyde Park,	15,507	3	–	–	–	–	–	–	–
Woburn,	15,308	5	2	1	1	–	–	–	–
Newburyport,	14,949	4	–	1	–	1	–	–	–
Gardner,	14,699	2	1	–	–	–	–	–	–
Marlborough,	14,579	5	1	2	–	–	–	–	–
Clinton,	13,075	3	1	1	1	–	–	–	–
Milford,	13,055	3	1	–	–	–	–	–	–
Adams,	13,026	4	0	–	–	–	–	–	–
Framingham,	12,948	3	1	–	–	–	–	–	–
Weymouth,	12,895	–	–	–	–	–	–	–	–
Watertown,	12,875	1	1	–	–	–	–	–	–
Southbridge,	12,592	5	4	1	1	–	–	–	–
Plymouth,	12,141	–	–	–	–	–	–	–	–
Webster,	11,509	2	1	2	1	1	–	–	–
Methuen,	11,448	4	1	–	–	–	–	–	–
Wakefield,	11,404	3	–	–	–	–	–	–	–
Arlington,	11,187	2	–	–	–	–	–	–	–
Greenfield,	10,427	2	–	1	1	–	–	–	–
Winthrop,	10,132	2	–	–	–	–	–	–	–
Recapitulation.									
Total of reporting towns,	2,565,623	645	156	181	82	51	9	5	2

WEEKLY RETURNS OF DEATHS FROM CERTAIN INFECTIOUS DISEASES.

Deaths from Infectious Diseases not specifically mentioned in above Tables during the Weeks of Nov. 4, 11, 18 and 25, 1911.

DISEASE.	Place.	Week ending —			
		Nov. 4.	Nov. 11.	Nov. 18.	Nov. 25.
Cerebro-spinal meningitis,	Adams,	1	–	–	–
	Boston,	1	2	1	1
	Pittsfield,	–	1	1	–
	Somerville,	1	–	–	–
Scarlet fever,	Boston,	–	2	1	–
	Lowell,	–	1	–	–
	Somerville	–	–	–	1
Whooping cough,	Boston,	–	1	2	2
	Cambridge,	–	–	1	–
	Everett,	–	1	–	–
	Lowell,	1	–	–	1
	Newburyport,	–	–	1	–
	Salem,	–	–	1	1
	Taunton,	–	1	–	–
Erysipelas,	Boston,	1	–	1	–
	Fall River,	–	–	–	1
Tuberculosis, other than pulmonary.	Attleborough,	–	–	–	1
	Boston,	2	1	–	1
	Cambridge,	–	2	–	–
	Chicopee,	–	–	–	1
	Fall River,	1	–	–	–
	Lowell,	–	–	2	–
	Malden,	1	–	–	–
	Marlborough,	–	–	–	2
	Methuen,	–	1	–	–
	Milford,	1	–	–	–
	North Adams,	–	–	–	1
	Taunton,	–	–	1	–
	Waltham,	–	–	1	–
	Worcester,	–	–	–	1
Anterior poliomyelitis,	Boston,	–	1	1	1
Meningitis other than cerebro-spinal.	Attleborough,	–	1	–	–
Influenza,	Boston,	1	–	–	–
Tetanus,	Attleborough,	1	–	–	–

WEEKLY RETURNS OF CASES OF INFECTIOUS DISEASES.

Cases of Infectious Diseases reported during the Weeks of Nov. 4, 11, 18 and 25, 1911.

[Under the provisions of section 52 of chapter 75 of the Revised Laws.]

	Week ending—				
	Nov. 4.	Nov. 11.	Nov. 18.	Nov. 25.	Total.
Diphtheria,	141	157	139	139	576
Measles,	61	105	149	187	502
Scarlet fever,	107	120	117	157	501
Typhoid fever,	54	65	35	44	198
Tuberculosis, pulmonary,	124	112	138	116	490
Tuberculosis other than pulmonary,	1	–	2	1	4
Cerebro-spinal meningitis,	3	1	2	1	7
Meningitis other than cerebro-spinal,	–	–	–	–	–
Whooping cough,	45	56	109	74	284
Varicella,	55	56	86	71	268
Erysipelas,[1]	1	1	–	–	2
Mumps,[1]	–	–	4	2	6
Ophthalmia neonatorum,	31	28	35	19	113
Anterior poliomyelitis,	7	4	4	4	19
Tetanus,	–	–	1	1	2
Smallpox,	–	–	1	1	2
Malaria,	–	–	–	1	1
Trachoma,	–	–	–	1	1

[1] Erysipelas and mumps are not diseases notifiable under section 52 of chapter 75 of the Revised Laws. The figures concerning these diseases are, therefore, incomplete.

MONTHLY REPORT ON INSPECTION OF FOOD AND DRUGS.

The following summary presents the results of the examination of food and drugs made by the State Board of Health during the month of November, 1911:—

Articles examined.	Number found to be of Good Quality.	Number adulterated or varying from the Legal Standard.	Total.	Articles examined.	Number found to be of Good Quality.	Number adulterated or varying from the Legal Standard.	Total.
Butter,	3	–	3	Jams and jellies,	7	–	7
Canned fruit and vegetables,	5	–	5	Lard,	2	–	2
Cider,	–	1	1	Malt liquor,	1	–	1
Cocoa,	1	–	1	Maple sugar,	1	–	1
Coffee,	4	–	4	Maple syrup,	1	3	4
Condensed milk,	4	–	4	Meat products:—			
Confectionery,	2	–	2	Canned meat,	–	2	2
Cream,	19	–	19	Hamburg steak,	2	–	2
Cream of tartar,	1	–	1	Head cheese,	1	–	1
Drugs,	127	31	158	Sausages,	7	7	14
Egg powder,	2	–	2	Milk,	468	35	503
Flavoring extracts:—				Olive oil,	10	–	10
Lemon,	2	2	4	Pickles,	2	–	2
Vanilla,	9	–	9	Proprietary food,	4	–	4
Fruit juices,	1	–	1	Spices,	4	–	4
Honey,	2	–	2	Table sauces,	2	1	3
Horse-radish,	5	–	5	Vinegar,	5	7	12
				Total,	704	89	793

The samples of drugs found to be adulterated were alcohol, camphor liniment, quinine pills, spirit of nitrous ether, spirit of anise, spirit of peppermint and proprietary medicines.

The cities and towns in which samples were collected were: Adams, Arlington, Attleborough, Beverly, Boston, Brockton, Chelsea, Chicopee, Fall River, Fitchburg, Gloucester, Haverhill, Holyoke, Hyde Park, Lawrence, Lanesborough, Lenox, Lowell, Lynn, Mansfield, Marlborough, Melrose, Middleborough, Milford, Millbury, New Bedford, Newton, Newburyport, North Adams, Northbridge, Peabody, Pittsfield, Quincy, Reading, Salem, Shelburne Falls, Southbridge, South Braintree, Springfield, Stoneham, Swansea, Waltham, Winchester and Woburn.

PROSECUTIONS FOR VIOLATIONS OF THE LAW RELATING TO FOOD AND DRUGS.

Two convictions were secured during the month of November, 1911, for selling adulterated food, as follows:—

No.	Name of Defendant.	Place.	Character of Article sold.
1	John C. Benz, . . .	Pittsfield, .	Milk ((total solids, 9.17).[1], [2]
2	John Day, ...	Winchester, .	Milk (total solids, 12.36).[2]

[1] Appealed. [2] Watered.

Fines imposed, $100.

LIST OF ADULTERATED OR IMPROPERLY LABELED FOODS, ETC., FOR NOVEMBER, 1911.

Number of Sample.	Character of Sample.	Name of Manufacturer, Wholesaler or Producer.	Results of Analyses.
9752 N	Artificial flavor of lemon.	Bell Preserving Co., Boston, Mass , ...	Improperly labeled; low in citral.
9754 N	Artificial flavor of lemon.	J. H. Folkins Co., Boston, Mass., ...	Improperly labeled; low in citral.
———	Merrimac tomato catsup.	F. M. Bell & Co., Boston and Lowell, Mass., . . .	Improperly labeled; per cent. of sodium benzoate not correctly stated.
9814 N	Denatured alcohol, .	Albert M. Crafts, Haverhill, Mass , ...	Improperly labeled.
15750	Camphor liniment, .	Charles A. Baker, Fall River Mass.	42.5 per cent. U. S. P. strength.
15748			42.5 per cent. U. S. P. strength.
15805			38.0 per cent. U. S. P. strength.
15766	Camphor liniment, .	La Fayette Square Pharmacy, Haverhill, Mass , .	85 per cent. U. S. P. strength.
15730	Camphor liniment, .	John J. Forrest, Lawrence, Mass., ...	85 per cent. U. S. P. strength.
15732	Arnold's bromo-celery,	Arnold Chemical Co., Chicago, Ill , ...	Contains acetanilid.
8883 R	Maltol, . . .	McLaughlin & Dennison, Woburn, Mass., . . .	Percentage of alcohol not stated on label.
8917 R	Thymo-septol, . .	McLaughlin & Dennison, Woburn, Mass , . . .	Percentage of alcohol not stated on label.
15727	Quinine pills, . .	Independent Pharmaceutical Co., Worcester, Mass., .	Improperly labeled; low in quinine.
9798 N	Sweet spirits of niter, .	Prichard Pharmacy, Worcester, Mass., ...	66 per cent. U. S. P. strength.
15806	Spirit of anise, . .	Chas. A. Baker, Fall River, Mass., ...	23 per cent. U. S. P. strength.
9796 N	Spirit of peppermint, .	People's Pharmacy, Worcester, Mass., ...	23 per cent. U. S. P. strength.
9800 N	Spirit of peppermint, .	Charles A. Nelson, Haverhill, Mass., ...	35.8 per cent. U. S. P. strength.
9802 N	Spirit of peppermint, .	N. C. Tozier, Haverhill, Mass., ...	70 per cent. U. S. P. strength.
9804 N	Spirit of peppermint, .	Stevens & Dow, Haverhill, Mass , ...	57.9 per cent. U. S. P. strength.
9810 N	Spirit of peppermint, .	Gammon & Broderick, Haverhill, Mass., . . .	54.7 per cent. U. S. P. strength.
15740	Spirit of peppermint, .	B. F. Riddell, Fall River, Mass., ...	19 per cent. U. S. P. strength.
15772	Spirit of peppermint, .	L. J. Sinnotte, Haverhill, Mass., ...	54.7 per cent. U. S. P. strength.
15803	Standard essence of peppermint.	Davis & Hatch Spice Co., New Bedford, Mass., . .	4.21 per cent. U. S. P. strength.
9906 N	Spirit of peppermint, .	Peoples Pharmacy, Worcester, Mass., ...	22 per cent. U. S. P. strength.
9922 N	Spirit of peppermint, .	St. George's Pharmacy, Fall River, Mass., . . .	42 per cent. U. S. P. strength.
9926 N	Spirit of peppermint, .	J. Bte. Gaudreau, Fall River, Mass., ...	10 per cent. U. S. P. strength.

LIST OF ADULTERATED OR IMPROPERLY LABELED FOODS, ETC. — *Concluded.*

Number of Sample.	Character of Sample.	Name of Manufacturer, Wholesaler or Producer.	Results of Analyses.
8879 R	Milk,	John C. Hood, Winchester, Mass.,	Total solids, 11.37 per cent.; fat, 3.90 per cent.; contained added water.
8881 R	Milk,	John C. Hood, Winchester, Mass.,	Total solids, 11.19 per cent,; fat, 3.70 per cent.; contained added water.
15796	Milk,	Lithuanian Co-operative Co., Middleborough, Mass.,	Total solids, 11.36 per cent.; fat, 3.90 per cent.; contained added water.
15930	Milk,	Carter Bros., Gloucester, Mass.,	Total solids, 10.56 per cent.; fat, 3.00 per cent.; contained added water.
15931	Milk,	Carter Bros., Gloucester, Mass.,	Total solids, 10.50 per cent.; fat, 3.00 per cent.; contained added water.
15937	Milk,	William H. Younger, Gloucester, Mass.,	Total solids, 10.02 per cent.; fat, 2.70 per cent.; contained added water,

INSPECTION OF DAIRIES.

During the month of November, 1911, 153 dairies were examined in the following places:—

Place.	Number examined.	Number found to present no Objectionable Features.	Per Cent.	Number concerning which Letters were sent.	Per Cent.
Agawam,	13	10	76.92	3	23.08
Second inspection,	27	23	85.19	4	14.81
East Longmeadow,	29	21	72.41	8	27.59
Second inspection,	10	7	70.00	3	30.00
Hampden,	14	13	92.86	1	7.14
Second inspection,	24	15	62.50	9	37.50
Longmeadow,	4	3	75.00	1	25.00
Second inspection,	3	2	66.67	1	33.33
Monson,	4	3	75.00	1	25.00
Wilbraham,	16	12	75.00	4	25.00
Second inspection,	9	7	77.78	2	22.22

Total number of dairies examined,	153
Number found to be free from objectionable conditions,	116
Number concerning which letters were sent,	37
Total number of conditions to which attention was called,	114
Percentage of dairies which passed inspection,	75.82

In addition to the above, 77 dairies were visited at which the sale of milk had been discontinued.

The names of the owners of the dairies found to be worthy of commendation follow:—

Agawam.

Class A.

Bodurtha, S. S.*

Class B.

Abel, R. J.*
Ahl, John
Ahl, M. L.*
Allen, Walter E.
Bailey, D. L.*
Bennett, Estate of Seth*
Bodurtha, Henry*
Brady, J. T.*
Brown, Charles M.
Burt, J.*
Campbell, E. L.*
Campbell, F. E.
Campbell, F. H.
Channel, A. W.*
Chapman, C. C.*
Crouss, C. T.
Dudley, Fred
Fisk, E. S.*
Fowler, T.*
Hull, Charles H.*
Huntington, Estate of G. H.*
Inman, Charles W.
Jarkowski, S.*
Jones, Almon*
Lester Bros.*
Morrell, John
Reilly, J.*
Robinson, W. L.*
Schwartz, Sumner*
Seaver, W. H.
Smith, R. J.*
Todd, A. J.*

* Second inspection.

East Longmeadow.

Class B.

Allen, E. A.
Ashley, H. S.
Burgoyne, Joseph
Conway, J. J.
Denslow, Albert
Donnelly, Samuel
Donnelly, Thomas
Foley, T. J.
Hancock, E.
Johnson, Carl
Johnson, John P.
King, F. S.
King, H. W.
Kronvall, Peter
Lavilotte, F. M.
Ley, C. H.*
Lull, H. W.*
Markham, C. F.
Markham, E. B.*
Michaels, W. R.
Miller, H. C.
Nichols, Joseph
Pease, H. W.*
Pease, M. P.*
Peasley, Joseph
Reed, Estate of A. D.*
Spellman, S.*
Woods, John

Hampden.

Class B.

Bartlett, Edward
Bartlett, Walter
Bradway, E. K.*
Butterworth, George C.*
Butterworth, H. E.
Chapin, Clinton
Chapin, George A.
Davis, W. W.
Driscoll, Charles *
Fowler, John H.*
Goodwill, H.*
Hayes, A. W.* †
Ingham, Thomas* †
Isham, J. B.*
Isham, Ralph
Laird, L. W.*
Leach, W. W.*
McCray, D. L.*
Nordeau, John
O'Brien, Daniel
Patch, W. V.*
Robb, J. W.
Robbins, A. G.
Ryder, H. W.
Stebbins, C. H.
Temple, E. H.*
Toohig, John *
Wall, P. F.*

Longmeadow.

Class B.

Bowles, H. L.* †
Burt, H. M.*
Manning, D.
Pomeroy, O. C.
Reedy, Patrick

Monson.

Class B.

Raimers, William
Starkey, Frederick
Edson, H. A.

Wilbraham.

Class B.

Beebe, Charles
Beebe, Miss E. O.
Bliss, H. M.* †
Bliss Sisters *
Bowles, Clarence *
Calkins, George
Dickinson, E. E.
Farr, J. H.*
Farr, L. L.
File, G. R.*
Frances, John
Green, B. B.
Green, B. F.
Green, J. C.
Lyons, John
O'Leary, T. F.
Pease, G. H.*
Phelps, A. A.*
Pickens, J. M.

* Second inspection. † Reported favorably on first inspection.

PROPRIETARY PREPARATIONS ADVERTISED AS UNSALABLE AT RETAIL IN NOVEMBER, 1911.

Thymol-septol (a useful antiseptic and disinfectant liquid for external and internal uses). Manufactured only by McLaughlin & Dennison, Prescription Druggists, 417 Main Street, Woburn, Mass. (No statement of the percentage of alcohol.)

Maltol (Dr. Hoff's Favorite Prescription). Exclusive right to manufacture this preparation is controlled only by McLaughlin & Dennison, Prescription Druggists, 417 Main Street, Woburn, Mass. (No statement of the percentage of alcohol.)

SMALLPOX AND THE VACCINATION LAW.[1]

The recent occurrence of an epidemic of smallpox in the State of Rhode Island makes distinctly pertinent a discussion of vaccination and of the laws of Massachusetts concerning vaccination. This is especially true of the present epidemic because of its proximity to the city of Fall River, where the anti-vaccination propaganda has been very actively carried on during the last few years. This movement has been led by a misguided homeopathic physician and has been backed by many English-born operatives, who have brought from the mother country very positive but none the less erroneous ideas concerning the efficacy of vaccination as a preventive of smallpox.

The laws of Massachusetts concerning vaccination are essentially as follows: —

Revised Laws, Chapter 75.

Section 137. The board of health of a city or town, if, in its opinion, it is necessary for the public health or safety, shall require and enforce the vaccination and re-vaccination of all the inhabitants thereof and shall provide them with the means of free vaccination. Whoever refuses or neglects to comply with such requirement shall forfeit five dollars.

Section 138. The board of health of a city or town in which any incorporated manufacturing company, almshouse, reform or industrial school, hospital or other establishment where the poor or sick are received, prison, jail or house of correction or any institution which is supported or aided by the commonwealth is situated may, if it decides that it is necessary for the health of the inmates or for the public safety, require the authorities of said establishment or institution, at the expense thereof, to cause all said inmates to be vaccinated.

[1] Reprinted from Boston Medical and Surgical Journal, (Editorial), Dec. 7, 1911.

Section 139. Any person over twenty-one years of age who presents a certificate signed by the register of a probate court that he is under guardianship shall not be subject to the provisions of section one hundred and thirty-seven; and any child who presents a certificate, signed by a registered physician designated by the parent or guardian, that the physician has at the time of giving the certificate personally examined the child and that he is of the opinion that the physical condition of the child is such that his health will be endangered by vaccination shall not, while such condition continues, be subject to the provisions of the two preceding sections of this chapter.

Revised Laws, Chapter 44.

Section 6. A child who has not been vaccinated shall not be admitted to a public school except upon presentation of a certificate, granted for cause stated therein, signed by a regular practising physician that he is not a fit subject for vaccination. A child who is a member of a household in which a person is ill with smallpox, diphtheria, scarlet fever, measles, or any other infectious or contagious disease, or a household exposed to such contagion from another household as aforesaid, shall not attend any public school during such illness until the teacher of the school has been furnished with a certificate from the board of health of the city or town, or from the attending physician of such person, stating that danger of conveying such disease by such child has passed.

Previous to 1898 no child who had not been vaccinated could be admitted to the public school, but chapter 496, section 11, of the Acts of 1898 so amended section 6 of chapter 44 of the Revised Laws that any child could be exempted from this vaccination clause "upon presentation of a certificate, granted for cause stated therein, signed by a regular practising physician that he is not a fit subject for vaccination."

The result has been that some legally qualified practitioners of medicine have been found willing to give a certificate of exemption to any child; in fact, one such physician advertises in the daily press his willingness to issue such certificates to all comers. Furthermore, such certificates once issued would seem to be subject to no time limit as far as school attendance is concerned.

On the other hand, if a board of health of a city or town requires and enforces vaccination and revaccination in accordance with the provisions of section 137 (chapter 75, Revised Laws), exemption certificates given in accordance with the provisions of section 139 (chapter 75, Revised Laws) need be honored only while the physical condition continues to be such as will be endangered by vaccination.

Considerable confusion has, therefore, resulted through the attempt of the boards of health and school committees to limit to any specified time the life of an exemption certificate issued for school purposes, and as a consequence of this chaotic condition of the vaccination laws an ever-increasing body of unvaccinated children has been growing up, and the baleful results of this failure to make use of vaccination may become apparent at any time. In fact, in the present epidemic, over 80 per cent. of those afflicted show no evidence of successful vaccination.

It is not necessary at this time to repeat all the arguments pointing to the great value of vaccination as a preventive of smallpox. It has been shown time and again that those countries in which vaccination is most thoroughly carried out are those most free from the disease. That smallpox has been stamped out in the Philippines by thorough vaccination is a brilliant case in point. Unbiased persons cannot but believe the evidence which is submitted to them. Those who maintain the anti-vaccination propaganda will not be convinced by any evidence however strong.

The situation is certainly one which requires very serious consideration. It seems very doubtful whether in the present state of public opinion the vaccination laws can be brought back to the strictness required before 1898. Under the circumstances, it might be advisable for Massachusetts to take pattern after the State of Minnesota.

In Minnesota the health authorities have taken the stand: First, that in vaccination the citizens have a procedure which will, in the vast majority of instances, protect them against an infection with smallpox; secondly, that those persons who through neglect or fanaticism fail to take advantage of this beneficial protective cannot expect the State to take extraordinary precautions to protect them against the consequences of their own folly.

Therefore, in the State of Minnesota, aside from isolation of the patient and the vaccination of those who have been intimately associated with the patient, no further attempts at quarantine are taken. In this way many delinquents are stimulated to submit to vaccination, and the State is relieved of large financial expense for quarantine. The system is said to work very excellently.

It is true that such a system does not protect children against the folly of their parents or guardians, and some children through lack of vaccination would under such a system undoubtedly become sick, and would very possibly become disfigured for life, even if they did not die.

In the same way many children have been sacrificed by unreasoning parents through failure to utilize the splendid powers of diphtheria

antitoxin and through misplaeed confidence of the value of Christian Seienee. It is to be hoped that the very strong and inereasing interest in anti-typhoid inoculation whieh has been proved of sueh tremendous value in the United States Army may have an important reaetive influence upon the practiee of vaccination against smallpox. The prineiple is, of eourse, exaetly the same; that is, in order to seeure proteetion against the ravages of what might be a severe infection, the individual is required to pass through what is a very mild form of the same disease. Having passed through this mild but specifie infeetion, the individual becomes, in the great majority of instanees, refraetory to any subsequent attaek from the same miero-organism.

To revert to the time limit during whieh a certifieate of exemption from vaeeination for school ehildren shall remain in force, it would seem that, for present purposes, the sehool committee of any city or town might well eall into aetion its very broad general powers, for by Revised Laws, chapter 44, section 3, ehildren are given the right to attend the publie sehools, "subject to such reasonable regulations as to the numbers and qualifieations of pupils to be admitted to the respective schools, and as to other sehool matters, as the school eommittee shall from time to time preseribe."

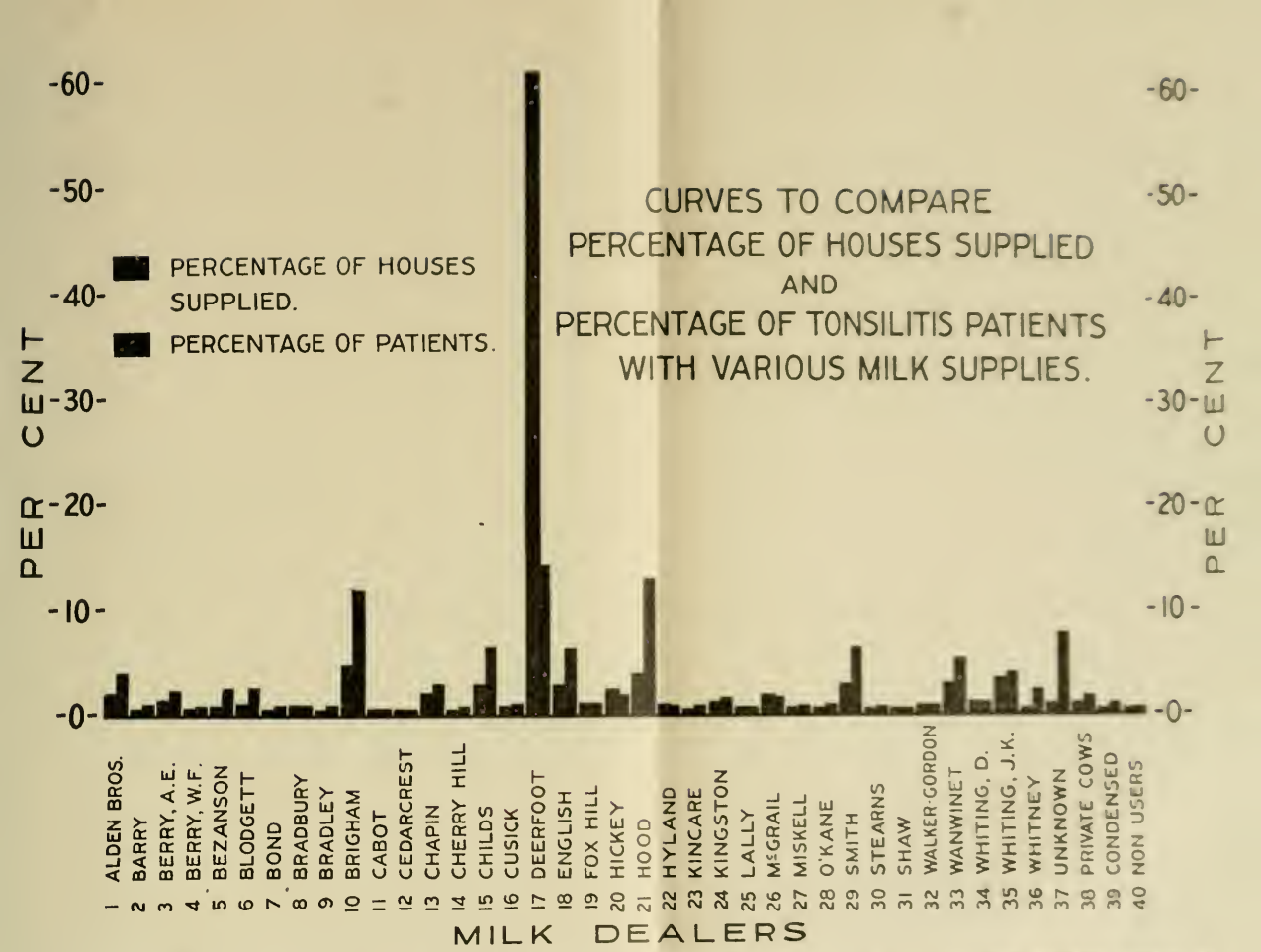
Why should not a sehool committee make it a rule that eertifieates of exemption should remain in foree for one year only from the original date of issue? Sueh a regulation by the school committee would elear the way to a eertain extent at least, although it would not strike at the root of what is really a very serious situation.

AN EPIDEMIC OF TONSILLITIS DUE TO INFECTED MILK.[1]

By Mark W. Richardson, M.D., *Secretary of Massachusetts State Board of Health.*

On Sunday, May 14, 1911, I received in the evening a telephone message from Dr. E. A. Darling, of Cambridge, stating that tonsillitis was unusually prevalent in the city of Cambridge, and that it seemed to have an intimate relation to the Deerfoot milk supply. The matter was referred immediately for investigation to Dr. W. W. Waleott, State Inspeetor of Health for District No. 10, in which Southborough, the home of Deerfoot milk, is situated, and also to Dr. Frank L. Morse, of Somerville, State Inspector of Health for District No. 5, in whieh district lies the city of Cambridge.

[1] Reprinted from the Boston Medical and Surgical Journal, Dec. 14, 1911.



NOTE.— In the original chart from which this plate was made, the percentage of patients was represented in red. In interpreting this chart, therefore the reader must imagine that the left-hand column over each milk supply is red, and the right-hand column black.

The preliminary reports concerning the situation began to come into the office of the State Board of Health within a few days, and were very conflicting. Dr. Walcott stated that in his district no relation to the Deerfoot farm milk could be made out, whereas in Dr. Morse's district such a relation was apparently very marked. For instance, in the city of Marlborough an investigation of 57 cases of tonsillitis taken at random showed that Deerfoot milk constituted about 50 per cent. of the city's supply, and was used either alone or combined with other milk supplies in 47 per cent. of the cases, and that the other 9 milk dealers were implicated in proportions that would naturally be expected from the amount of milk supplied by them. In Cambridge, on the other hand, of a total of 223 cases, it was found that, with but 5 exceptions, all of them had obtained milk from the Deerfoot farm supply. The greater number of cases appeared to occur on the 13th, 14th and 15th of the month, after which time there was a steady diminution. At an early stage of the investigation it was rumored, moreover, that tonsillitis was epidemic in other cities of the Commonwealth, and also in more distant cities, such as New York, New Haven and Washington. In fact, it was thought that in connection with the cases of tonsillitis in Southborough a source of infection had been found in a party of tourists who, some two weeks previously, had visited Washington, where the disease was said to be prevalent. Letters of inquiry, however, sent to all the State Inspectors of Health in Massachusetts, and also to the above-mentioned cities and other States, soon showed that the rumors as to prevalence of tonsillitis in those cities were unfounded. The necessity for seeking the source of this epidemic near home became more and more apparent.

Fortunately, the town of Brookline planned almost immediately a house-to-house investigation of the disease, but the preliminary reports from this investigation also discredited quite emphatically the idea that the disease was due to any special milk supply. It was with great interest, however, that the final figures secured by this board were awaited. Through the kindness of Dr. Frederick H. Osgood, milk inspector of the Brookline board of health, I was enabled some weeks later to examine the figures obtained by this board and also a map on which had been plotted the milk supply of the town, together with the cases of tonsillitis which had occurred in the town during the epidemic period. I regret very much that this map could not be reproduced and presented at this meeting, for I believe that, even though such a map must be only approximately accurate, the information to be derived from it has been of great value.

The figures obtained in Brookline have been reproduced in chart form by Dr. Harry Linenthal, State Inspector of Health for District No. 4,

and this chart shows to my mind that the occurrence of tonsillitis in Brookline must have been due to contamination of the Deerfoot farm milk supply.

The chart shows the relation of the number of cases of tonsillitis which occurred in 3,445 houses in Brookline as compared with the number of houses supplied by each of the various milk contractors, and you see that, whereas Deerfoot farm supplied only 13.8 per cent. of the total number of houses, 61 per cent. of the total cases investigated occurred in houses supplied with Deerfoot milk.

Another interesting feature brought out by the map of Dr. Osgood was that a certain portion of the town, although quite fully supplied with Deerfoot milk, showed practically no cases of tonsillitis. This fact, difficult to explain at first, has been made perfectly clear by the statement that the unaffected portion of Brookline received its milk from the so-called Northborough supply, whereas the infected areas received their milk from the so-called Southborough portion of the Deerfoot supply.

Five cultures taken from infected individuals have been subjected to investigation by Prof. Theobald Smith, pathologist to the State Board of Health. One of these cultures differed from the other four and soon died out. It was probably one of the *pneumococci.* The remaining four represented cases of empyema, erysipelas and adenitis, and a fatal case concerning which further information is not available. These cultures were all *streptococci* growing fairly well in ordinary agar and in bouillon without blood or other similar additions. In bouillon the *cocci* all appeared in fairly long chains. They were all hæmolytic in blood agar. Virulence tests are in progress. These cultures thus correspond to *streptococcus pyogenes,* and there have been no individual differences discernible thus far.

Their source may perhaps be determined by comparative tests which include *streptococci* from human, bovine and equine disease.)

FECAL CONTAMINATION OF ROLLER TOWELS.

The bacteriologist to the board, Mr. Henry N. Jones, has undertaken recently the examination of roller towels from a number of toilet rooms, each of which was accessible to a considerable number of persons, in the expectation that the results of such an examination might indicate, in a general way, the types of bacteria likely to be found on public towels,

and especially, by demonstrating either the presence or absence of organisms peculiar to the intestinal tract, throw some light on the relative safety in the use of such towels.

Twelve towels were examined. The procedure was as follows: A representative portion of the towel, about one square inch in area, was wiped off with a sterile diphtheria swab, which was then transferred to a tube of sterile physiological salt solution. From this suspension agar plates were poured, incubated at body temperature, and examined after twenty-four and forty-eight hours.

No detailed study of the various saprophytic forms was undertaken, beyond noting their general characteristics and morphology. Particular study was made of any organisms found which might be presumably of fecal origin, such as *B. coli*. Bacilli of the colon type were identified by their morphology, staining reaction, and the composition of the gas produced in the fermentation of lactose bile.

Some difficulty was experienced in obtaining satisfactory plates, as the universal occurrence of organisms of the subtilis type with their rapidly spreading growth necessitated the use of high dilutions. Furthermore, the proper dilutions to be used in the examination of any particular towel were largely problematical, as the number of living bacteria obtained from the different towels varied enormously.

Following the large spore-bearing organisms of the subtiloid group in point of frequency, and of greater significance, were *staphylococci*, colonies of which were obtained from many of the towels. The presence of these pus-producing organisms would seem to indicate distinctly the possibility that *staphylococci* of high virulence might be transferred from one person to another through the use of the common towel.

Of greatest significance, however, was the isolation from three of the towels of the *B. coli*, while from towel No. 5 there was isolated an organism identified as *Proteus vulgaris*. Thus towels Nos. 8, 11 and 12 furnished strong evidence of fecal contamination, and No. 5 was also most probably contaminated in the same manner.

Summary.

A considerable proportion of public roller towels become contaminated with human feces. An unknown number of human "carriers" have typhoid bacilli in their feces. How many cases of typhoid fever are contracted through contact with soiled roller towels?

The Results in Tabular Form.

Towel No.	B. Coli.	Staphylococci. Grain +	B. Subtilis.	Other Organisms.
1	0	++	+	
2	0	0	+	
3	0	+	+	
4	0	+	+	
5	0	0	+	B. proteus.
6	0	0	+	
7	0	+	+	
8	0	+	+	
9	+	+	+	
10	0	+	+	
11	+	+	+	
12	+	+	+	

IMPORTANT OPINION OF ATTORNEY-GENERAL SWIFT IN RELATION TO THE ESTABLISHMENT BY CITIES AND TOWNS OF TUBERCULOSIS HOSPITALS.

We print below an opinion of the Attorney-General of the Commonwealth which will be of interest to many cities and towns which may have in contemplation the establishment of hospitals for tuberculosis.

DEC. 4, 1911.

ARTHUR DRINKWATER, Esq., *Trustee of Hospitals for Consumptives, 3 Joy Street, Boston.*

DEAR SIR: — You have submitted to me three inquiries relative to the construction of St. 1911, c. 597, entitled "An Act to encourage and promote the building and use of tuberculosis hospitals in cities and towns." This statute, in section 1, provides that —

> Every city or town which establishes and maintains a tuberculosis hospital shall be entitled to receive from the commonwealth a subsidy of five dollars per week for each patient who is unable to pay for his support, or whose kindred bound by law to maintain him are unable to pay for the same, but the city or town shall not become entitled to this subsidy unless, upon examination authorized by the trustees of hospitals for consumptives, the sputum of such patients be found to contain bacilli of tuberculosis, and unless the hospital be subject to the inspection of, and be approved by, said trustees.

Your inquiries are substantially whether or not a city or town is entitled to the subsidy above provided for (1) if it maintains in a private tuberculosis hospital a tuberculosis ward or bed or beds; (2) if it maintains a tuberculosis ward in a general city or town hospital, or a bed or beds for tubercu-

lous patients in such hospitals; and (3) if it maintains a tuberculosis ward in a private general hospital or a bed or beds for tuberculous patients in such hospital.

I am of opinion that all three of these inquiries should be answered in the negative. The purpose of the statute is obviously as stated in the title, "to encourage and promote the building and use of tuberculosis hospitals;" or, in other words, to furnish an inducement to cities and towns to erect and maintain hospitals for persons afflicted with tuberculosis where such patients may be cared for and treated. It follows, therefore, that cities and towns which maintain wards or beds in private hospitals or in general city hospitals are not entitled to the subsidy provided for in the section above quoted.

Very truly yours,

JAMES M. SWIFT, *Attorney-General.*

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Approved by
The State Board of Publication.

WEEKLY RETURNS OF DEATHS FROM CITIES AND TOWNS OF MORE THAN 10,000 POPULATION.

WEEK ENDING DEC. 2, 1911.

CITIES AND TOWNS.	Population. Census for 1910.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM—					
				Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	670,585	191	34	54	20	19	–	1	–
Worcester,	145,986	39	8	7	3	1	2	–	–
Fall River,	119,295	33	11	10	4	4	–	–	–
Lowell,	106,294	28	13	11	3	2	–	1	2
Cambridge,	104,839	29	8	8	3	3	1	–	–
New Bedford,	96,652	29	9	7	5	2	–	–	–
Lynn,	89,336	15	1	4	2	1	–	–	–
Springfield,	88,926	28	7	9	4	1	–	–	–
Lawrence,	85,892	16	1	6	4	–	–	–	–
Somerville,	77,236	12	0	3	2	1	–	–	–
Holyoke,	57,730	11	2	4	2	2	–	–	–
Brockton,	56,878	12	3	3	1	1	–	–	–
Malden,	44,404	12	3	4	2	1	–	–	–
Haverhill,	44,115	8	1	4	3	1	–	–	–
Salem,	43,697	10	4	2	1	–	–	–	–
Newton,	39,806	8	1	3	3	–	–	–	–
Fitchburg,	37,826	14	2	3	1	1	1	–	–
Taunton,	34,259	13	4	7	2	1	–	1	–
Everett,	33,484	5	2	1	–	1	–	–	–
Quincy,	32,642	5	1	3	2	1	–	–	–
Chelsea,	32,452	12	2	1	1	–	–	–	–
Pittsfield,	32,121	8	–	–	–	–	–	–	–
Waltham,	27,834	5	1	1	–	–	–	1	–
Brookline,	27,792	8	–	–	–	–	–	–	–
Chicopee,	25,401	8	3	3	3	–	–	–	–
Gloucester,	24,398	9	2	2	1	1	–	–	–
Medford,	23,150	4	1	1	1	–	–	–	–
North Adams,	22,019	2	2	–	–	–	–	–	–
Northampton,	19,431	10	1	3	1	–	–	–	–
Beverly,	18,650	7	1	1	1	–	–	–	–
Revere,	18,219	2	–	–	–	–	–	–	–
Leominster,	17,580	8	3	2	1	1	–	–	–
Attleborough,	16,215	3	0	1	–	1	–	–	–
Westfield,	16,044	4	–	2	–	1	–	1	–
Peabody,	15,721	8	2	1	–	–	–	–	–
Melrose,	15,715	4	–	–	–	–	–	–	–
Hyde Park,	15,507	3	1	1	1	–	–	–	–
Woburn,	15,308	5	2	1	–	–	–	–	–
Newburyport,	14,949	3	1	1	1	–	–	–	–
Gardner,	14,699	1	–	–	–	–	–	–	–
Marlborough,	14,579	4	0	–	–	–	–	–	–
Clinton,	13,075	4	–	2	–	2	–	–	–
Milford,	13,055	6	2	1	–	–	–	–	–
Adams,	13,026	4	2	–	–	–	–	–	–
Framingham,	12,948	2	0	–	–	–	–	–	–
Weymouth,	12,895	–	–	–	–	–	–	–	–
Watertown,	12,875	3	2	–	–	–	–	–	–
Southbridge,	12,592	3	1	–	–	–	–	–	–
Plymouth,	12,141	7	3	2	1	1	–	–	–
Webster,	11,509	1	1	1	1	–	–	–	–
Methuen,	11,448	3	–	–	–	–	–	–	–
Wakefield,	11,404	1	–	–	–	–	–	–	–
Arlington,	11,187	3	1	–	–	–	–	–	–
Greenfield,	10,427	2	1	–	–	–	–	–	–
Winthrop,	10,132	0	–	–	–	–	–	–	–
Recapitulation.									
Total of reporting towns,	2,593,485	675	150	180	80	50	4	5	2

WEEK ENDING DEC. 9, 1911.

CITIES AND TOWNS.	Population. Census for 1910.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM—					
				Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	670,585	198	30	71	34	25	2	–	–
Worcester,	145,986	37	6	8	5	2	–	–	–
Fall River,	119,295	25	9	11	7	2	–	–	–
Lowell,	106,294	33	10	13	8	2	2	–	–
Cambridge,	104,839	21	8	8	4	1	–	–	–
New Bedford,	96,652	25	9	9	6	1	–	–	–
Lynn,	89,336	17	8	7	3	2	1	–	–
Springfield,	88,926	31	5	5	3	–	1	–	–
Lawrence,	85,892	11	3	3	1	–	1	1	–
Somerville,	77,236	20	4	3	2	–	–	–	–
Holyoke,	57,730	17	7	7	6	–	–	–	–
Brockton,	56,878	21	3	8	3	4	1	–	–
Malden,	44,404	9	3	7	3	–	4	–	–
Haverhill,	44,115	13	1	3	2	1	–	–	–
Salem,	43,697	9	–	3	1	2	–	–	–
Newton,	39,806	10	1	–	–	–	–	–	–
Fitchburg,	37,826	10	1	1	1	–	–	–	–
Taunton,	34,259	17	4	3	–	–	–	–	–
Everett,	33,484	7	–	1	–	1	–	–	–
Quincy,	32,642	5	–	2	1	1	–	–	–
Chelsea,	32,452	12	3	1	–	1	–	–	–
Pittsfield,	32,121	11	2	4	2	–	–	2	–
Waltham,	27,834	9	3	–	–	–	–	–	–
Brookline,	27,792	9	–	–	–	–	–	–	–
Chicopee,	25,401	5	2	3	2	–	–	–	–
Gloucester,	24,398	5	–	–	–	–	–	–	–
Medford,	23,150	6	1	2	2	–	–	–	–
North Adams,	22,019	4	3	1	1	–	–	–	–
Northampton,	19,431	5	2	2	–	1	1	–	–
Beverly,	18,650	6	3	3	2	–	–	–	–
Revere,	18,219	6	1	1	1	–	–	–	–
Leominster,	17,580	7	2	2	1	1	–	–	–
Attleborough,	16,215	4	0	–	–	–	–	–	–
Westfield,	16,044	5	1	1	–	1	–	–	–
Peabody,	15,721	3	1	1	–	–	–	–	–
Melrose,	15,715	3	1	2	1	1	–	–	–
Hyde Park,	15,507	4	–	2	1	–	–	1	–
Woburn,	15,308	6	1	2	1	1	–	–	–
Newburyport,	14,949	7	2	3	2	1	–	1	–
Gardner,	14,699	4	–	3	1	1	–	–	–
Marlborough,	14,579	2	1	–	–	–	–	–	–
Clinton,	13,075	9	1	5	5	–	–	–	–
Milford,	13,055	6	2	2	2	–	–	–	–
Adams,	13,026	4	2	–	–	–	–	–	–
Framingham,	12,948	5	0	1	–	1	–	–	–
Weymouth,	12,895	–	–	–	–	–	–	–	–
Watertown,	12,875	3	0	–	–	–	–	–	–
Southbridge,	12,592	1	1	–	–	–	–	–	–
Plymouth,	12,141	5	–	2	2	–	–	–	–
Webster,	11,509	2	0	1	–	1	–	–	–
Methuen,	11,448	4	2	1	–	1	–	–	–
Wakefield,	11,404	7	–	3	–	2	–	1	–
Arlington,	11,187	4	1	3	1	–	–	–	–
Greenfield,	10,427	1	–	–	–	–	–	–	–
Winthrop,	10,132	3	–	–	–	–	–	–	–
Recapitulation.									
Total of reporting towns,	2,593,485	713	150	226	117	57	13	6	–

WEEK ENDING DEC 16, 1911

CITIES AND TOWNS.	Population. Census for 1910.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM—					
				Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	670,585	230	50	77	31	27	4	12	1
Worcester,	145,986	38	11	13	8	2	1	-	-
Fall River,	119,295	19	6	9	4	2	1	-	-
Lowell,	106,294	38	16	16	6	3	1	1	12
Cambridge,	104,839	27	5	8	4	3	-	-	-
New Bedford,	96,652	23	6	8	2	2	-	2	-
Lynn,	89,336	20	4	5	3	1	1	-	-
Springfield,	88,926	24	9	11	6	1	-	-	1
Lawrence,	85,892	15	5	6	3	2	-	-	-
Somerville,	77,236	13	2	4	-	4	-	-	-
Holyoke,	57,730	22	11	9	7	1	1	-	-
Brockton,	56,878	19	3	6	4	-	-	1	-
Malden,	44,404	12	2	1	-	-	-	-	-
Haverhill,	44,115	12	2	2	2	-	-	-	-
Salem,	43,697	8	2	3	2	-	-	-	-
Newton,	39,806	6	1	1	1	-	-	-	-
Fitchburg,	37,826	18	5	2	2	-	-	-	-
Taunton,	34,259	15	2	7	4	1	-	-	-
Everett,	33,484	3	-	-	-	-	-	-	-
Quincy,	32,642	3	1	1	-	-	-	-	-
Chelsea,	32,452	7	1	2	-	2	-	-	-
Pittsfield,	32,121	10	-	1	1	-	-	-	-
Waltham,	27,834	9	2	3	2	1	-	-	-
Brookline,	27,792	10	-	1	1	-	-	-	-
Chicopee,	25,401	3	1	1	-	-	-	-	-
Gloucester,	24,398	7	1	-	-	-	-	-	-
Medford,	23,150	1	-	1	1	-	-	-	-
North Adams,	22,019	7	2	2	1	1	-	-	-
Northampton,	19,431	7	1	4	2	1	-	-	-
Beverly,	18,650	5	2	-	-	-	-	-	-
Revere,	18,219	3	2	1	-	-	-	-	-
Leominster,	17,580	2	-	1	-	-	-	-	-
Attleborough,	16,215	3	1	2	1	-	-	-	-
Westfield,	16,044	3	1	1	-	1	-	-	-
Peabody,	15,721	5	3	-	-	-	-	-	-
Melrose,	15,715	2	-	1	1	-	-	-	-
Hyde Park,	15,507	5	1	2	1	-	-	-	-
Woburn,	15,308	0	0	-	-	-	-	-	-
Newburyport,	14,949	3	1	1	-	-	1	-	-
Gardner,	14,699	4	2	-	-	-	-	-	-
Marlborough,	14,579	5	1	2	-	1	-	-	-
Clinton,	13,075	5	-	1	-	1	-	-	-
Milford,	13,055	5	1	3	1	-	-	1	-
Adams,	13,026	2	0	-	-	-	-	-	-
Framingham,	12,948	2	0	1	-	1	-	-	-
Weymouth,	12,895	-	-	-	-	-	-	-	-
Watertown,	12,875	0	-	-	-	-	-	-	-
Southbridge,	12,592	1	-	-	-	-	-	-	-
Plymouth,	12,141	6	0	-	-	-	-	-	-
Webster,	11,509	2	0	-	-	-	-	-	-
Methuen,	11,448	3	1	1	-	1	-	-	-
Wakefield,	11,404	3	1	1	-	-	-	-	-
Arlington,	11,187	6	-	3	1	2	-	-	-
Greenfield,	10,427	4	1	-	-	-	-	-	-
Winthrop,	10,132	3	-	-	-	-	-	-	-
Recapitulation.									
Total of reporting towns,	2,593,485	708	169	225	102	61	10	7	4

WEEK ENDING DEC. 23, 1911.

CITIES AND TOWNS.	Population. Census for 1910.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM—					
				Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	670,585	189	49	72	33	17	4	1	–
Worcester,	145,986	34	7	9	6	–	2	–	–
Fall River,	119,295	28	8	11	3	4	1	–	–
Lowell,	106,294	33	10	11	8	–	1	–	2
Cambridge,	104,839	38	6	10	5	3	–	–	–
New Bedford,	96,652	25	9	11	4	1	–	2	–
Lynn,	89,336	13	3	2	1	1	–	–	–
Springfield,	88,926	37	11	14	5	4	1	–	1
Lawrence,	85,892	21	9	12	6	4	–	–	–
Somerville,	77,236	20	4	8	5	3	–	–	–
Holyoke,	57,730	16	3	9	6	2	–	–	–
Brockton,	56,878	8	2	2	2	–	–	–	–
Malden,	44,404	6	1	1	–	1	–	–	–
Haverhill,	44,115	15	0	4	1	2	–	–	–
Salem,	43,697	11	3	1	–	–	–	–	–
Newton,	39,806	6	1	1	1	–	–	–	–
Fitchburg,	37,826	9	1	3	1	1	1	–	–
Taunton,	34,259	13	4	6	2	2	–	–	–
Everett,	33,484	2	–	–	–	–	–	–	–
Quincy,	32,642	6	1	–	–	–	–	–	–
Chelsea,	32,452	17	6	3	2	1	–	–	–
Pittsfield,	32,121	7	3	1	1	–	–	–	–
Waltham,	27,834	9	2	1	1	–	–	–	–
Brookline,	27,792	3	0	–	–	–	–	–	–
Chicopee,	25,401	6	2	–	–	–	–	–	–
Gloucester,	24,398	8	1	–	–	–	–	–	–
Medford,	23,150	5	3	2	–	1	1	–	–
North Adams,	22,019	5	–	–	–	–	–	–	–
Northampton,	19,431	3	0	1	–	1	–	–	–
Beverly,	18,650	3	0	2	1	1	–	–	–
Revere,	18,219	2	1	1	1	–	–	–	–
Leominster,	17,580	4	0	1	1	–	–	–	–
Attleborough,	16,215	2	1	–	–	–	–	–	–
Westfield,	16,044	9	–	6	2	4	–	–	–
Peabody,	15,721	1	0	1	–	–	–	–	–
Melrose,	15,715	8	1	2	1	1	–	–	–
Hyde Park,	15,507	2	–	–	–	–	–	–	–
Woburn,	15,308	3	1	1	1	–	–	–	–
Newburyport,	14,949	3	1	2	1	–	–	1	–
Gardner,	14,699	3	1	2	1	1	–	–	–
Marlborough,	14,579	3	0	–	–	–	–	–	–
Clinton,	13,075	2	1	1	1	–	–	–	–
Milford,	13,055	4	1	2	1	1	–	–	–
Adams,	13,026	1	1	–	–	–	–	–	–
Framingham,	12,948	7	1	3	1	1	–	1	–
Weymouth,	12,895	–	–	–	–	–	–	–	–
Watertown,	12,875	0	–	–	–	–	–	–	–
Southbridge,	12,592	2	–	–	–	–	–	–	–
Plymouth,	12,141	3	0	–	–	–	–	–	–
Webster,	11,509	3	1	–	–	–	–	–	–
Methuen,	11,448	1	–	1	–	1	–	–	–
Wakefield,	11,404	1	–	1	–	1	–	–	–
Arlington,	11,187	3	–	2	1	1	–	–	–
Greenfield,	10,427	4	–	1	–	–	–	1	–
Winthrop,	10,132	3	1	1	1	–	–	–	–
Recapitulation.									
Total of reporting towns,	2,593,485	670	160	226	107	60	10	6	3

Week ending Dec. 30, 1911.

Cities and Towns.	Population. Census for 1910.	Reported Deaths in Each.	Deaths under Five Years.	Deaths from —					
				Principal Infectious Diseases.	Acute Lung Diseases.	Tuberculosis, Pulmonary.	Diptheria.	Typhoid Fever.	Measles.
Boston,	670,585	231	42	72	34	21	2	–	2
Worcester,	145,986	38	10	11	4	2	–	–	–
Fall River,	119,295	26	11	8	4	1	–	1	–
Lowell,	106,294	44	18	13	7	3	–	–	1
Cambridge,	104,839	27	6	11	5	4	1	–	–
New Bedford,	96,652	30	8	9	3	3	–	1	–
Lynn,	89,336	28	6	7	4	1	1	–	–
Springfield,	88,926	38	7	12	7	2	–	–	–
Lawrence,	85,892	21	10	2	–	–	–	–	–
Somerville,	77,236	28	7	10	8	2	–	–	–
Holyoke,	57,730	23	8	10	6	1	1	–	–
Brockton,	56,878	15	7	7	3	1	–	–	–
Malden,	44,404	12	3	5	1	2	–	–	–
Haverhill,	44,115	12	1	4	2	2	–	–	–
Salem,	43,697	17	1	5	2	2	–	–	–
Newton,	39,806	9	6	2	2	–	–	–	–
Fitchburg,	37,826	13	7	3	3	–	–	–	–
Taunton,	34,259	11	3	6	1	4	–	–	–
Everett,	33,484	3	–	1	1	–	–	–	–
Quincy,	32,642	8	3	2	–	–	1	–	–
Chelsea,	32,452	20	3	2	1	1	–	–	–
Pittsfield,	32,121	9	2	4	2	–	1	–	–
Waltham,	27,834	8	0	4	2	1	–	–	–
Brookline,	27,792	2	1	–	–	–	–	–	–
Chicopee,	25,401	3	1	2	1	–	–	–	–
Gloucester,	24,398	8	1	–	–	–	–	–	–
Medford,	23,150	5	–	1	1	–	–	–	–
North Adams,	22,019	10	4	2	1	1	–	–	–
Northampton,	19,431	7	1	1	–	1	–	–	–
Beverly,	18,650	6	2	2	–	–	2	–	–
Revere,	18,219	4	2	–	–	–	–	–	–
Leominster,	17,580	5	0	3	3	–	–	–	–
Attleborough,	16,215	6	4	–	–	–	–	–	–
Westfield,	16,044	2	–	–	–	–	–	–	–
Peabody,	15,721	6	2	–	–	–	–	–	–
Melrose,	15,715	3	–	–	–	–	–	–	–
Hyde Park,	15,507	4	1	–	–	–	–	–	–
Woburn,	15,308	5	1	–	–	–	–	–	–
Newburyport,	14,949	1	1	–	–	–	–	–	–
Gardner,	14,699	2	–	–	–	–	–	–	–
Marlborough,	14,579	2	0	1	1	–	–	–	–
Clinton,	13,075	1	1	–	–	–	–	–	–
Milford,	13,055	7	1	4	4	–	–	–	–
Adams,	13,026	2	0	–	–	–	–	–	–
Framingham,	12,948	3	1	2	1	–	–	1	–
Weymouth,	12,895	–	–	–	–	–	–	–	–
Watertown,	12,875	4	0	2	2	–	–	–	–
Southbridge,	12,592	4	–	–	–	–	–	–	–
Plymouth,	12,141	6	1	1	–	–	–	–	–
Webster,	11,509	5	3	–	–	–	–	–	–
Methuen,	11,448	2	–	1	–	–	–	–	–
Wakefield,	11,404	3	–	1	–	1	–	–	–
Arlington,	11,187	4	1	1	1	–	–	–	–
Greenfield,	10,427	5	1	1	–	–	–	–	–
Winthrop,	10,132	2	–	1	1	–	–	–	–

Recapitulation.

Total of reporting towns,	2,593,485	803	199	236	118	56	9	3	3

WEEKLY RETURNS OF DEATHS FROM CERTAIN INFECTIOUS DISEASES.

Deaths from Infectious Diseases not specifically mentioned in above Tables during the Weeks of Dec. 2, 9, 16, 23 and 30, 1911.

Disease.	Place.	Week ending —				
		Dec. 2.	Dec. 9.	Dec. 16.	Dec. 23.	Dec. 30.
Cerebro-spinal meningitis,	Boston,	–	–	–	1	–
	Cambridge,	–	–	–	1	1
	Lowell,	1	–	–	–	–
	New Bedford,	–	1	–	–	–
	Pittsfield	–	–	–	–	1
	Taunton,	–	–	1	–	–
	Worcester,	–	1	2	–	–
Scarlet fever,	Boston,	2	–	–	2	–
	Beverly,	–	1	–	–	–
	Holyoke,	–	–	–	1	–
	Lowell,	1	–	–	–	1
	Lynn,	–	1	–	–	–
	Springfield,	–	–	–	–	1
Whooping cough,	Boston,	–	2	–	2	1
	Brockton,	–	–	–	–	1
	Cambridge,	–	–	–	1	–
	Fall River,	–	1	–	–	–
	Lowell,	–	–	–	–	1
	Milford,	1	–	1	–	–
	Newburyport,	–	1	–	–	–
	Peabody,	–	1	–	–	–
	Salem,	1	–	1	1	–
	Worcester,	–	–	–	–	1
Erysipelas,	Boston,	1	–	–	1	2
	Lawrence,	–	–	–	1	–
	Marlborough,	–	–	1	–	–
Tuberculosis, other than pulmonary,	Boston,	7	2	7	1	2
	Brockton,	–	–	–	–	1
	Cambridge,	–	2	–	–	–
	Fall River,	–	–	1	2	–
	Gardner,	–	1	–	–	–
	Greenfield,	–	–	–	–	1
	Holyoke,	–	1	–	–	2
	Hyde Park,	–	–	1	–	–
	Lawrence,	–	–	1	–	–
	Leominster,	–	–	1	–	–
	Lowell,	–	–	3	–	–
	Lynn,	1	–	–	–	–
	Methuen,	–	–	–	–	1
	New Bedford,	–	–	–	1	–
	Northampton,	1	–	–	–	–
	Peabody,	1	–	–	–	–
	Revere,	–	–	1	–	–
	Salem,	–	–	–	–	1
	Springfield,	1	1	–	1	–
	Waltham,	–	–	–	–	1
	Worcester,	1	–	–	1	3

DEATHS FROM INFECTIOUS DISEASES, ETC. — *Concluded.*

DISEASE.	Place.	WEEK ENDING — Dec. 2.	Dec. 9.	Dec. 16.	Dec. 23.	
Anterior poliomyelitis,	Lowell,	1	–	–	–	–
	Peabody,	–	–	–	1	–
Meningitis, other than cerebro-spinal,	Malden,	1	–	–	–	–
Influenza,	Arlington,	–	2	–	–	–
	Attleborough,	–	–	1	–	1
	Boston,	–	–	–	2	–
	Brockton,	–	–	–	–	1
	Haverhill,	–	–	–	1	–
	Quincy,	–	–	–	–	1
	Springfield,	1	–	1	–	–
Smallpox,	Boston,	–	1	–	–	–
	Somerville,	–	1	–	–	–

WEEKLY RETURNS OF CASES OF INFECTIOUS DISEASES.

CASES OF INFECTIOUS DISEASES REPORTED DURING THE WEEKS OF DEC. 2, 9, 16, 23 AND 30, 1911.

[Under the provisions of section 52 of chapter 75 of the Revised Laws.]

	WEEK ENDING — Dec. 2.	Dec. 9.	Dec. 16.	Dec. 23.	Dec. 30.	Total.
Diphtheria,	136	142	139	143	164	724
Measles,	180	202	309	251	251	1,193
Scarlet fever,	114	126	154	109	110	613
Typhoid fever,	38	30	30	27	22	147
Tuberculosis, pulmonary,	98	131	144	130	115	618
Tuberculosis other than pulmonary,	1	2	2	–	1	6
Cerebro-spinal meningitis,	1	2	5	1	4	13
Meningitis other than cerebro-spinal,	–	1	–	1	–	2
Whooping cough,	71	79	77	87	96	410
Varicella,	57	99	143	107	105	511
Erysipelas,[1]	–	–	–	–	1	1
Mumps,[1]	1	–	7	5	6	19
Ophthalmia neonatorum,	7	13	22	28	29	99
Anterior poliomyelitis,	–	1	3	1	1	6
Tetanus,	–	1	1	2	1	5
Smallpox,	–	–	–	2	–	2
Malaria,	–	–	4	1	–	5
Trachoma,	1	–	–	–	–	1
Anthrax,	1	–	–	–	1	2

[1] Erysipelas and mumps are not diseases notifiable under section 52 of chapter 75 of the Revised Laws. The figures concerning these diseases are therefore, incomplete.

MONTHLY REPORT ON INSPECTION OF FOOD AND DRUGS.

The following summary presents the results of the examination of food and drugs made by the State Board of Health during the month of December 1911:—

Articles examined.	Number found to be of Good Quality.	Number adulterated or varying from the Legal Standard.	Total.	Articles examined.	Number found to be of Good Quality.	Number adulterated or varying from the Legal Standard.	Total.
Butter,	2	–	2	Maple syrup,	1	3	4
Cocoa,	3	–	3	Meat products:—			
Coffee,	2	–	2	Chicken,	1	1	2
Confectionery,	–	1	1	Hamburg steak,	1	–	1
Cream,	10	1	11	Mince meat,	1	1	2
Drugs,	47	15	62	Sausages,	3	4	7
Eggs,	2	–	2	Milk,	369	91	460
Flavoring extracts:—				Shrimp,	1	–	1
Almond,	1	–	1	Olive oil,	1	–	1
Lemon,	5	–	5	Pickles,	3	–	3
Peppermint,	–	1	1	Spices,	3	–	3
Vanilla,	1	–	1	Table sauce,	–	1	1
Jams and jellies,	4	–	4	Tea,	1	–	1
Lard,	1	–	1	Total,	463	119	582

The samples of drugs found to be adulterated were alcohol, camphor liniment, methyl alcohol, spirit of anise, spirit of camphor and spirit of peppermint.

The cities and towns in which samples were collected were: Attleborough, Boston, Brockton, Cambridge, Chelsea, Concord, Dartmouth, Fall River, Fitchburg, Framingham, Gloucester, Haverhill, Lowell, Lynn, Lynnfield, Malden, Mansfield, Marblehead, Marlborough, Maynard, Melrose, New Bedford, North Chelmsford, Salem, Saugus, Somerville, Stow, Swansea, Taunton, Wakefield, Waltham, Woburn and Worcester.

PROSECUTIONS FOR VIOLATIONS OF THE LAW RELATING TO FOOD AND DRUGS.

Sixteen convictions were secured during the month of December, 1911, for selling adulterated food and drugs, as follows: —

No.	Name of Defendant.	Place.	Character of Article sold.
1	William L. Broderick,	Haverhill,	Alcohol (denatured) not properly labeled.
2	Geo. W. Smith,	Fall River,	Camphor liniment 38 per cent. U. S. P.
3	Thomas Linnene,	Lowell,	Maple syrup adulterated.
4	Chas. A. Rockwell,	Lowell,	Maple syrup adulterated.
5	Michael J. Flynn,	Winchester,	Milk (total solids, 11.80). [1, 2]
6	Henry L. Viles,	Weston,	Milk (total solids, 12.06).
7	Arthur A. Dart,	Stow,	Milk (total solids, 4.30). [1]
8	John S. Gracie,	New Bedford,	Milk (total solids, 11.68.) [3]
9	John S. Gracie,	New Bedford,	Milk (total solids, 8.18). [1]
10	Geo. W. Smith,	Fall River,	Spirit of anise, 23 per cent. U. S. P.
11	Zotique N. LeClair,	Fall River,	Spirit of peppermint, 50 per cent. U. S. P.
12	John B. Gandreau,	Fall River,	Spirit of peppermint, 12 per cent. U. S. P.
13	Wm. A. Volkman,	Worcester,	Spirit of peppermint, 22 per cent. U. S. P.
14	Ned C. Tozier,	Haverhill,	Spirit of peppermint, 70 per cent. U. S. P.
15	Chas. A. Nelson,	Haverhill,	Spirit of peppermint, 35.8 per cent. U. S. P.
16	Benj. F. Riddell,	Fall River,	Spirit of peppermint, 19 per cent. U. S. P.

[1] Watered. [2] Appealed. [3] Skimmed.

Fines imposed, $275.

LIST OF ADULTERATED OR IMPROPERLY LABELED FOODS, ETC., FOR NOVEMBER, 1911.

Number of Sample.	Character of Sample.	Name of Manufacturer, Wholesaler or Producer.	Results of Analyses.
15981	Riverside imitation maple butter.	Mansfield, Witham & Co., Lowell, Mass.,	Consists of cane sugar, glucose and benzoic acid; per cent. of ingredients not stated.
15975	Narragansett catsup,	Grocers Supply Company, Ltd., Fall River, Mass,	Contains benzoic acid.
15837	Essence of compound peppermint.	E. Cloutier, Fall River, Mass.,	Improperly labeled; contains a trace of oil peppermint.
q 8286	Alcohol,	T. F Freeman Company, Boston, Mass.,	Contains 78.77 per cent. alcohol by volume; not U. S. P. strength.
8939 R	Denatured alcohol,	W. O. Fuller Company, Mansfield, Mass.,	Improperly labeled.
15920	Camphor liniment,	T. C. Farley, North Adams, Mass.,	71.5 per cent. U. S. P. strength.
8931 R	Methyl alcohol,	Jaynes Drug Company, Boston, Mass.,	Improperly labeled.
q 8109	Spirit of camphor,	Bradford's Pharmacy, North Adams, Mass.,	65 per cent. U. S. P. strength.
q 8111	Spirit of camphor,	John A. Rice, North Adams, Mass.,	78 per cent. U. S. P. strength.
158 O	Spirit of peppermint,	St George's Pharmacy, Fall River, Mass.,	50 per cent. U. S. P. strength.
160 O	Spirit of peppermint,	J. Bte. Gaudreau, Fall River, Mass,	12 per cent. U. S. P. strength.
q 8200	Spirit of peppermint,	Morse Winslow Drug Shop, Boston, Mass.,	40 per cent. U. S. P. strength.
392 O	Spirit of peppermint,	Pelham Pharmacy, Boston, Mass.,	69 per cent. U. S. P. strength.
400 O	Spirit of peppermint,	Ralph B. Quinland, Boston, Mass.,	80 per cent. U. S. P. strength.
404 O	Spirit of peppermint,	Charles Coleman, Boston, Mass.,	49 per cent. U. S. P. strength.
8987 R	Milk,	George H. Schaffner, Watertown, Mass.,	Total solids, 11.52 per cent.; fat, 3.50 per cent.; contained added water.
8989 R			Total solids, 11.68 per cent,; fat, 3.70 per cent.; contained added water.
16019	Milk,	John S. Gracie, South Dartmouth, Mass.,	Total solids, 11.68 per cent.; fat, 2.40 per cent.; proteid, 3.65 per cent.; skimmed milk.
16020			Total solids, 9.28 per cent.; fat, 0.90 per cent.; proteid, 3.08 per cent.; skimmed milk.
16021			Total solids, 8.18 per cent.; fat, 1.70 per cent.; contained added water.

q 8190	Milk, ...	Arthur A. Dart, Stow, Mass., ...	Total solids, 7.04 per cent.; fat, 2.10 per cent ; contained added water.
q 8191			Total solids, 6.28 per cent.; fat, 1.90 per cent.; contained added water.
q 8192			Total solids, 4.40 per cent.; fat, 1.20 per cent.; contained added water.
q 8193			Total solids, 4.30 per cent.; fat, 1.20 per cent.; contained added water.
q 8194			Total solids, 5.44 per cent.; fat, 1.50 per cent.; contained added water.
q 8195			Total solids, 6.10 per cent.; fat, 1.60 per cent.; contained added water.
q 8196			Total solids, 8.90 per cent.; fat, 3.00 per cent.; contained added water.
q 8197			Total solids, 7.20 per cent.; fat, 1.90 per cent.; contained added water.
q 8198			Total solids, 4.44 per cent.; fat, 1.40 per cent.; contained added water.
q 8199			Total solids, 4.80 per cent.; fat, 1.40 per cent.; contained added water.
9043 R	Milk, ...	Henry L. Viles, Weston, Mass., ...	Total solids, 12.06 per cent.; fat, 3.90 per cent.; contained added water.
9045 R			Total solids, 11.90 per cent.; fat, 3.85 per cent.; contained added water.
9047 R			Total solids, 11.96 per cent.; fat, 3.90 per cent.; contained added water.
9049 R			Total solids, 11.86 per cent.; fat, 3.90 per cent.; contained added water.
9051 R			Total solids, 11.86 per cent.; fat, 3.90 per cent.; contained added water.
9053 R			Total solids, 12.16 per cent.; fat, 3.90 per cent.; contained added water.
9055 R			Total solids, 12.04 per cent.; fat, 4.00 per cent.; contained added water.
9057 R			Total solids, 12.12 per cent.; fat, 3.90 per cent.; contained added water.
9059 R			Total solids, 12.15 per cent.; fat, 3.90 per cent.; contained added water.
9061 R			Total solids, 12.17 per cent.; fat, 4.10 per cent.; contained added water.

LIST OF ADULTERATED OR IMPROPERLY LABELED FOODS, ETC. — *Concluded.*

Number of Sample.	Character of Sample.	Name of Manufacturer, Wholesaler or Producer.	Results of Analyses.
16071	Milk,	Joseph Paradis, Shawmut, Mass.,	Total solids, 8.30 per cent.; fat, 2.60 per cent.; contained added water.
16072			Total solids, 8.40 per cent.; fat, 2.70 per cent.; contained added water.
16073			Total solids, 9.82 per cent.; fat, 3.20 per cent.; contained added water.
16074			Total solids, 9 70 per cent.; fat, 3.10 per cent.; contained added water.
16075			Total solids, 9.96 per cent.; fat, 3.15 per cent.; contained added waler.
16086	Milk,	Joseph Perry, North Dartmouth, Mass.,	Total solids, 10.44 per cent.; fat, 3.40 per cent.; contained added water.
16087			Total solids, 10.54 per cent.; fat, 3.40 per cent.; contained added water.
16088			Total solids, 10.46 per cent.; fat, 3.45 per cent.; contained added water.
16089			Total solids, 10.54 per cent.; fat, 3.50 per cent.; contained added water.
16098	Milk,	Manuel Azvido, Fall River, Mass.,	Total solids, 11.62 per cent.; fat, 3.80 per cent.; contained added water.
16115	Milk,	Manuel F. Simmons, Somerset, Mass.,	Total solids, 11.24 per cent.; fat, 3.30 per cent.; contained added water.
16116			Total solids, 11.62 per cent.; fat, 3.60 per cent.; contained added water.
16120			Total solids, 9.54 per cent.; fat, 1.60 per cent.; contained added water.
q 8303	Milk,	Robert Bradford, Framingham, Mass.,	Total solids, 11.64 per cent.; fat, 4.00 per cent.; contained added water.
8304			Total solids, 11.26 per cent.; fat, 3.40 per cent.; contained added water.

INSPECTION OF DAIRIES.

During the month of December, 1911, 91 dairies supplying milk for public sale in Massachusetts were examined. All but 30 of the number are situated in New Hampshire and Vermont. The Massachusetts dairies yielded the following data:—

Place.	Number examined.	Number found to present no Objectionable Features.	Per Cent.	Number concerning which Letters were sent.	Per Cent.
Agawam,	2	2	100.00	–	–
Second inspection,	20	15	75.00	5	25.00
Third inspection,	1	1	100.00	–	–
Springfield,	2	2	100.00	–	–
Second inspection,	1	1	100.00	–	–
Third inspection,	1	1	100.00	–	–
West Boylston,	–	–	–	–	–
Third inspection,	2	–	–	2	100.00
Wilbraham,	1	–	–	1	100.00

Total number of dairies examined (including those in New Hampshire and Vermont),	91
Number found to be free from objectionable conditions,	69
Number concerning which letters were sent,	22
Total number of conditions to which attention was called,	70
Percentage of dairies which passed inspection,	75.82

Included in the total number of Massachusetts dairies were 5 which had started recently in the milk-producing business and were inspected for the first time.

In addition to the above, 11 dairies were visited at which the sale of milk had been discontinued.

The names of the owners of the dairies in Massachusetts found to be worthy of commendation follow:—

Agawam.

Class B.

Blish, George O.*
Brown, A. H.‡
Flower Brothers*
Granger, William H.*†
Halliday, A. F.*
Humerson, Ira *†
Johnson, F. L.*
Kelley, M. B.*
Kimons, James
Latowski, A.
McIntyre, E. E.*
Meachim, W. L.*
Roberts, Thomas M.*
Sawyer, S. H.*
Spear, George*
Steer, Dexter*
Sullivan, D.*
Taylor Brothers*

Springfield.

Class B.

Bobard, Felix ‡
King, Edward P.*
Markham, A. G.
Prouty, N. D.

* Second inspection. † Reported favorably on first inspection. ‡ Third inspection.

New Hampshire Dairies.

Place.	Number examined.	Number found to present no Objectionable Features.	Per Cent.	Number concerning which Letters were sent.	Per Cent.
Claremont,	23	16	69.57	7	30.43
Croydon,	3	3	100.00	–	–
Goshen,	7	5	71.43	2	28.57
Newport,	9	8	88.89	1	11.11
Sunapee,	8	6	75.00	2	25.00
Unity,	6	5	83.33	1	16.67

Total number of New Hampshire dairies examined,	56
Number found to be free from objectionable conditions,	43
Number concerning which letters were sent,	13
Total number of conditions to which attention was called,	42
Percentage of dairies which passed inspection,	76.79

In addition to the above dairies, 25 were visited at which the sale of milk had been discontinued, or the supply of which had been diverted to New Hampshire creameries.

Vermont Dairies.

Place.	Number examined.	Number found to present no Objectionable Features.	Per Cent.	Number concerning which Letters were sent.	Per Cent.
Wethersfield,	5	4	80.00	1	20.00

Total number of Vermont dairies examined,	5
Number found to be free from objectionable conditions,	4
Number concerning which letters were sent,	1
Total number of conditions to which attention was called,	2
Percentage of dairies which passed inspection,	80.00

In addition to the above, 6 dairies were visited at which the sale of milk had been discontinued.

PROPRIETARY PREPARATIONS ADVERTISED AS UNSALABLE AT RETAIL DURING THE YEAR 1911.

During the year 5 proprietary preparations containing alcohol, and with no statement or an incorrect statement as to the percentage of alcohol, were advertised as unsalable at retail, under the provisions of chapter 386 of the Acts of 1906, namely: —

Vino Sangre: Medicinal Wine. S. S. Pierce Company, importers and grocers, Boston, Mass. (No statement as to the presence of alcohol.)

Macdonald's Astringent Hair Tonic for Dandruff and Hair Loss. Manufactured by Macdonald Toilet Specialty Company, Detroit, N. Y., and Toronto. (No statement as to the percentage of alcohol.)

Milk Cordial-Panna Cream. A Health Tonic. Prepared by Prof. Antonio Alai, Suterville, Pa. (Incorrect statement of the amount of alcohol.)

Thymo-septol (a useful antiseptic and disinfectant liquid for external and internal uses). Manufactured only by McLaughlin & Dennison, Prescription Druggists, 417 Main Street, Woburn, Mass. (No statement as to the percentage of alcohol.)

Maltol (Dr. Hoff's Favorite Prescription). Exclusive right to manufacture this preparation is controlled only by McLaughlin & Dennison, Prescription Druggists, 417 Main Street, Woburn, Mass. (No statement as to the presence of alcohol.)

The following preparation was also advertised as unsalable at retail, under the provisions of chapter 386 of the Acts of 1906: —

Robbins' Headache Powders. Prepared by McLaughlin & Dennison, 417 Main Street, Woburn, Mass. (No statement as to the presence of phenacetine.)

OPHTHALMIA NEONATORUM.[1]

By Catherine Brannick, Head Worker of the Social Service Department, Massachusetts Charitable Eye and Ear Infirmary.

It is now four years since the department began the study of ophthalmia neonatorum by securing wherever possible a social and medical history of each case treated in the hospital wards. In that period 388 cases have been under observation.

Following are the more important statistics of these cases: —

Place of birth of child: —		
At home,		320
In hospital,		63
Unknown,		5
Birth attended by: —		
Physician: —		
Private,	272	
Dispensary,	30	
City,	3	
Hospital,	63	
		368
Midwife,		10
Unattended by midwife or physician,		3
Unknown,		5
Condition of eyes on admission to hospital: —		
Cornea clear,		321
Cornea involved,		67
Condition of eyes on discharge: —		
Normal vision,		323
Partially blind,		42
Totally blind,		23
Nationality in 354 cases: —[2]		
English-speaking parentage (British Provinces, American, Irish),		218
French Canadian,		29
Jewish,		31
Italian,		25
Colored,		23
Swedish,		5

[1] Reprinted from the fourth report of Social Service Work at the Massachusetts Charitable Eye and Ear Infirmary for the year October, 1910-October, 1911.

[2] Complete record of nationality not kept during first year of study.

Nationality in 354 cases — *Con.*

Portuguese,	5
Polish,	4
German,	3
Dutch,	2
Syrian,	3
Lithuanian,	1
Greek,	1
Unknown,	4

Sent to infirmary from: —

Boston,	198
36 other Massachusetts towns,	151
Other States,	5

Statistics of Cases of 65 Babies who became Blind or Partially Blind.

Place of birth: —

At home,	61
In hospital,	4

Birth attended by: —

Private physician,	55
Hospital physician,	4
Midwife,	3
Unattended,	2
Unknown,	1

Nationality: —

English-speaking parentage,	33
French Canadian,	15
Italian,	4
Jewish,	5
Swedish,	2
Polish,	2
Syrian,	1
Lithuanian,	1
Colored,	2

In the four years during which this study has been going on, a systematic campaign of education on this subject has been conducted by private and public institutions in this State and elsewhere. In Massachusetts, especially, the work for the prevention of blindness from this cause has been markedly progressive and far-reaching, and yet in our study of the 109 cases of infant ophthalmia treated at the Infirmary during the past twelve months, there are included the histories of 8 babies made totally blind, and 3 partially blind by this disease. These histories are

but repetitions of the histories of other little unfortunates contained in the studies of previous years. In every case the baby was admitted to hospital too late to save the vision; in every case the eye condition had been treated by a physician who had failed to take into account the serious nature of the disease and the necessity of intelligent nursing from the start; in every case the parents had been completely ignorant of the disease and its possible consequences.

In the face of the widespread work for prevention, the histories of these 8 blind babies, the largest number of totally blind noted in a single year since the study began, would make discouraging reading if one did not know the context. During the first year of the study it became evident that our figures could give no indication of the problem throughout the State, as the babies sent to the Infirmary practically all came from Greater Boston. The law making it obligatory to report such cases to the board of health had then been in force for more than a year, yet one local board of health after another gave information that no cases had been reported and that the board of health itself knew nothing of the disease. Since that time the work of the Massachusetts Board of Health and of the Commission for the Blind through the State, and that of the Boston board of health in this city, has brought about a very different situation. Very many of the cases treated at the Infirmary during the past year were sent there through local boards of health, and the number of cases from the more distant parts of the State has increased each year. In the beginning, it was felt that many cases of blindness from ophthalmia neonatorum might have occurred in Massachusetts other than those treated too late at the Infirmary or those reported later to the Commission for the Blind. Facts gathered through the State by the Commission for the Blind bear out this view. It is probably true, then, that blindness from this cause is in reality decreasing, but that we are much nearer to knowing the actual extent of it in the State.

Further evidence of this may be found in a comparison of the number of babies made partially or totally blind for the following successive years: —

Year.	Number under Observation.	Number made Blind or Partially Blind.
1907-08,	46	12
1908-09,	116	29
1909-10,	119	13
1910-11,	107	11

As the partially blind babies have only sheer good luck to thank for the fact that they are not totally blind, the neglect in practically all of these cases having been quite as flagrant as in the cases of those who suffered complete loss of sight, the conclusion to be drawn from these figures is very hopeful. Babies still become blind, but the percentage of neglected cases has been cut almost two-thirds in the past three years. This result has undoubtedly been brought about by the educational campaign conducted by the boards of health of the State and city and by the State Commission for the Blind, perhaps the most concentrated and persistent piece of social work ever attempted on a single subject by public institutions. Although the history of blindness in these babies repeats the same facts this year as in the first year of the study, the after history is quite different. To-day the baby has a hearing; and not alone the living blind baby, but also the dead blind baby and the partially blind baby, whose cases once were not at all considered. The work of prosecuting the responsible persons, begun by the Boston board of health and carried into the State by other institutions, has given the story of the babies the publicity so much needed.

The most unexpected finding in our four years' study has been the fact that the doctors and not the midwives are responsible for blindness from ophthalmia neonatorum. So far as our figures show, however, this is not because midwives have been careful while doctors have been careless, but because the midwife has appeared very little in our figures. Out of the 388 cases under observation, a midwife has attended the birth in only 10 cases. Neglect was shown in 3 of these, a high percentage when compared with the percentage of neglect in cases attended by physicians.

The doctor of Massachusetts, then, must be held responsible, and back of him his medical school. The public social institutions have been able to do much in the way of prevention, but much of their work is necessarily corrective, after the harm has been done. The institutions in the best position to do preventive work are the medical schools, and upon these should be placed the burden of that eternal vigilance which must always be the price of sight for the babies.

THE POSSIBLE ETIOLOGICAL RELATION OF CERTAIN BITING INSECTS TO THE SPREAD OF INFANTILE PARALYSIS.

By Charles T. Brues, Instructor in Economic Entomology, Harvard University, and Philip A. E. Sheppard, M.D., Boston, Mass.

In attempting to discover any connection between insects and the spread of epidemic anterior poliomyelitis, a number of facts must be considered. Much that has already been learned from clinical and epidemiological investigations can be turned to account, not only to reduce the number of insects which might be suspected of transmitting this disease, but also to suggest certain *a priori* conclusions to be tested out, both in the field and by experimentation.

It will be well to outline briefly the data which suggest insects as carriers, as well as to enumerate such facts as appear significant from an entomological standpoint.

1. The sporadic occurrence of the cases: this is not easily explained on the basis of ordinary contact infection, at least in many instances.

2. The seasonal distribution of the disease shows the largest incidence during the warmer months, when insects of all sorts are most prevalent.

3. The failure on the part of investigators to show that the disease spreads most where many children are regularly in close contact. It seems, on the contrary, from reports thus far published, to be the exception rather than the rule for several in a family to contract the disease, even though the number of young children be large.

4. The comparative immunity from this disease of large cities in which the proportion of biting insects to the human population must be less than in more sparsely settled or in rural districts, while the opportunities for personal contact are at a maximum.

5. The fact that in the towns of Massachusetts, where the disease has been most prevalent, the proportion of animals to the population is greater than in the cities, where the disease is least prevalent, in itself implies a larger number of biting and parasitic insects which may affect man as well as animals. Furthermore, when we consider the paralyses of animals and their possible relation to human anterior poliomyelitis. the study of biting parasites becomes increasingly interesting and important.

The table following shows that during the period July 30–Sept. 26, 1911, the homes of 88 patients in 17 cities and towns were investigated

as to the presence of biting flies and insects in close proximity to the affected individuals: —

Cities and Towns visited.

Date of First Visit.	City or Town.	Number of Cases.
July 30,	Waltham,	2
Aug. 13,	Tewksbury,	6
Aug. 15,	Winthrop,	3
Aug. 17,	Woburn,	14
Aug. 24,	Somerville,	10
Aug. 26,	Newton,	4
Aug. 30,	Winchester,	2
Aug. 31,	Pocasset (Bourne),	2
Sept. 6,	Hamilton,	1
Sept. 6,	Marblehead,	1
Sept. 7,	Marlborough,	6
Sept. 16,	Lowell,	14
Sept. 16,	Westford,	1
Sept. 20,	Roxbury,	4
Sept. 25,	Winchendon,	1
Sept. 26,	Fall River,	13
Sept. 26,	New Bedford,	4

Stomoxys calcitrans L., the ordinary biting stable fly, was the only biting insect other than mosquitoes to be found constantly in the immediate vicinity of the patients. Interesting facts bearing upon this aspect of the problem are as follows: —

In Woburn, where 14 cases occurred, a paralytic affection of pigs was reported previous to the beginnings of the human disease. In another instance a cat was paralyzed.

In Lowell, furthermore, in one family a cat became paralyzed coincidently with a child in the same family. Moreover, the cases in Lowell were distributed along the main artery of traffic from the city of Woburn, and situated either on or sufficiently near the main thoroughfare to be within easy flying distance of it. In other words it is possible that infected flies from Woburn may have followed horses or may have been carried on vehicles from Woburn into Lowell. In point of time Woburn cases occurred first.

In Somerville one case gave the history that, one month before the

attack, the patient was stung between the shoulders by a strange insect, and at the same time an adult member of the same family was bitten in the same way. The sting was accompanied by a sharp pain and was probably due to some species of *Tabanus,* although it may have been that of *Stomoxys* or other biting insect. In two instances in Somerville the fathers of the affected children were teamsters, and in one instance two older boys in the family were also teamsters. The implication is, of course, that teamsters, being in intimate contact with horses, might bring home with them infected biting flies. Furthermore, another home was situated in a narrow court close to the freight yard of the Boston & Maine railroad. Wickman and others have noted a close relation between anterior poliomyelitis and railroad tracks. It is suggested that the transportation of food-producing animals over the railroad and the constant association with these animals of biting flies, may have an important bearing on the occurrence of this disease. One victim in Attleborough was a freight brakeman.

In Newton one case occurred on the outskirts of the city, where several cows were reported to have been lame in the hind quarters two weeks before the child was taken sick. The cows were pastured in a field adjoining the house where the patient lived, and frequently escaped into the back yard of this house.

In a case which occurred in Hamilton the father was a coachman, and thus naturally had much to do with horses and other animals.

In Fall River, an adult, male, seventy-three years old, gave, unsolicited, a history of bites by stable flies a week or ten days previous to a febrile attack and paralysis of one arm.

Summary.

Nothing absolutely definite has hitherto been ascertained regarding the channels of infection of acute epidemic poliomyelitis.

Many facts connected with the distribution of cases and the spread of epidemics of this disease, together with histories of insect bites, suggest at least that the disease may be insect-borne.

From our field work during the present summer, together with a consideration of the epidemiology of the disease, it is suggested that *Stomoxys calcitrans L.* may be responsible for the spread of acute epidemic poliomyelitis. No facts which disprove such hypothesis have as yet been adduced.

Experiments based upon this hypothesis are now in progress.

THE DANGER OF FATAL POISONING FROM ROACH AND OTHER INSECT POWDERS CONTAINING SODIUM FLUORIDE.

By Charles H. Hickey, Assistant Analyst to the Board.

On Dec. 24, 1910, the State police brought to the laboratory of the State Board of Health a portion of white powder which was thought to have caused the death of a girl ten years of age in Lowell, Mass. This girl, not feeling well, was sent by her mother to a local drug store to purchase five cents' worth of Rochelle salts. She returned with a package labeled "Rochelle Salts," and her mother gave her one teaspoonful of the remedy in a little water. Within half an hour the child began to vomit and to have copious discharges from the bowels, and at the same time she complained of severe pain in the abdomen. There was, moreover, pain in the legs and feet, and also in the arms and hands. Her face became very pale and her lips blue; her "eyes turned in her head;" she muttered incoherently. She died within an hour, and before the arrival of a physician.

A few days later the police again brought a sample which was purchased at the same drug store and had caused severe illness in two people, a man and wife, both between fifty and sixty years of age. Each had taken about two teaspoonfuls of the powder in water, had been very sick, with vomiting and discharges from the bowels, accompanied by great weakness. The timely arrival of a physician had relieved them, but they were sick for two days before recovery.

Chemical examinations of the powders showed that each contained a high percentage of sodium fluoride, and in about equal amounts. On receiving the report of the analyses the police made further investigation as to the criminal liability for the girl's death. The druggist, it seems, had obtained his material from an artists' supply store, having ordered Rochelle salts.

On visiting this establishment the officers found two barrels in the same room, each containing a white powder which, on casual observation, might be mistaken for the other. Analysis of a sample from one barrel showed it to be pure Rochelle salts. The other was found to hold a mixture containing sodium fluoride, and corresponded so closely, within probable analytical error, to those causing the death of the girl and the illness of the man and wife, that it could be concluded with practical certainty that all three powders were made up of one and the same sub-

stance. The evidence at the inquest proved conclusively that an error had been made at the artists' supply store by sending to the druggist roach powder instead of Rochelle salts. The ruling of the court was that no one was criminally liable.

The labeling of this powder, as formerly sold by the artists' supply house for use as an insecticide, is absolutely misleading. It is as follows: —

ROACH DEATH.

Under the name of Roach Death we are offering to the public an article nonpoisonous in its nature, which exterminates Ants, Bugs, Clocks, Roaches and other insects. It is an odorless white powder, positively harmless, and for exterminating all insect pests has no equal in anything now on the market.

A recent purchase at the same store revealed the fact that now at least one dealer in this material appreciates its dangers. On the side of the box is affixed a large red "POISON" label; the revised main label now reads: —

Under the name of Roach Death we are offering to the public an article which exterminates Ants, Bugs, Clocks, Roaches and other insects. It is an odorless white powder, and for exterminating all insect pests has no equal in anything on the market.

The somewhat unusual facts of this case led the writer to look up the literature on the toxic action of sodium fluoride. The only article found was one by Herbert B. Baldwin, analytic and consulting chemist of Newark, N. J., who has reported [1] a number of cases of sickness and death resulting from the accidental ingestion of this substance. In one case occurred illness and subsequent death in a man who ate three or four pancakes prepared, as was afterward found, with roach poison which had been mistaken for baking powder. Others of the same family, but who ate less, became sick within from five to fifteen minutes. They escaped with purging and vomiting which continued for a day or more accompanied by pains in the limbs.

In another case about twenty-six grams of fluoride were used instead of baking powder in preparing wheat cakes. One individual (a man) ate nine cakes; another, six; another, five; and another, one. If the mixing were done thoroughly, the doses in this case were respectively nine, six, five, and one gram. All became sick. The symptoms varied.

[1] Journal American Chemical Society, 1899, Vol. 21, p. 517.

The person eating nine grams was seized with very violent cramps almost at once. These continued for thirty-six hours and were followed by pain lasting three or four days before recovery. The mother was most seriously affected. She did not vomit for about five hours, but diarrhœa soon began and was of serious import for several days. She was confined to her bed for two days, and did not fully recover for a month.

In another instance a man was made to vomit by the mere taste of the substance. Another individual (an intoxicated man) took about fifty grains by mistake for Rochelle salts. He was taken with violent vomiting and purging, but recovered within a few days.

To ascertain the probable chance of buying powders of this sort, and in order to secure analytical data as to the amount of sodium fluoride used, if any, the writer purchased, in the open market, thirteen samples of insect powder. Of these, six samples contained sodium fluoride. Five of these did not bear a poison label, and yet analyses showed that they contained from 16 to 47 per cent. of this material.

It is important to note the character of the labels on these samples. Some give no hint that they contain poison. Others are so labeled that scarcely any knowledge as to their dangerous character is gained. When we consider the possibility of mistakes such as those mentioned above, it certainly seems that sodium fluoride should be recognized as a highly poisonous substance, and that our poison law should be so amended that all preparations containing soluble compounds of fluorine shall be plainly labeled "poison."

The analyses of these five samples and the misleading statements are as follows: —

No.	Name of Powder and Manufacturer.	Statement on Label regarding Poisonous Nature or Other Cautions.	Per Cent. of Fluoride calculated as Sodium Fluoride.
1	Roachsault, Barrett Chemical Company, New York City.	– – – –	47.25
2	Martin's Pest Exterminator, Waltham Chemical Company, Waltham, Mass.	Nonpoisonous except to cockroaches.	62.13
3	Peterman's Roach Food, Wm. Peterman, New York City.	– – – –	34.72
4	Peterman's Ant Food, Wm. Peterman, New York City.	Do not use on animals. Caution: do not spill this powder on glassware as it will injure the polish.	36.72
5	Hooper's Fatal Food, O. Hooper Jadwin, New York City.	– – – – Only slightly poisonous,	16.07

A NOTE ON SMALLPOX AND VACCINATION IN THE PHILIPPINE ISLANDS.[1]

By Victor G. Heiser, Director of Health, Philippine Islands.

During December, 1910, a person afflicted with smallpox was transferred from San José, Antique, to the island of Caluya, which is a small isolated island south of Mindora, the inhabitants of which have heretofore not been systematically vaccinated. An old woman took some of the contents of a pustule from the smallpox case shortly before death and commenced to vaccinate a number of the inhabitants. Smallpox in epidemic form soon resulted. The population of Caluya and near-by islands is about 2,000. Approximately 1,000 cases of smallpox occurred before the facts became known to the outer world. Vaccinators, properly equipped, were immediately sent to Caluya. They vaccinated 800 of the remaining thousand persons. Of these not one contracted smallpox who had a successful vaccination that was two weeks old. The chief quarantine officer visited 10 families, ranging from 5 to 8 in number. In 6 of these every member was stricken with smallpox. A physical examination showed that they had no vaccination marks. In two other families 6 persons were stricken and 2 escaped infection. A physical examination showed that of the 6 stricken members not one had been vaccinated. The 2 remaining members had successful vaccination marks. Upon inquiry it was learned that they had visited Calapan a year previously and were vaccinated while there. In two other families living in the midst of a smallpox stricken village there were no cases of smallpox. A physical examination showed that they had good vaccination scars. Further inquiry elicited the statement that they had but recently come from another island where they had been vaccinated. In one house one person was found with varioloid. Upon inquiry it was learned that he had been vaccinated during childhood.

Net result: Community of 2,000 population; 1,000 unvaccinated persons contract smallpox; 400 die; 800 are protected by vaccination; no cases occur after the incubation period was passed; no deaths occur. The remaining 200 are semicivilized and fled from the vaccinators, and their condition is unknown.

[1] Reprint from the Public Health Reports, Vol. XXVI, No. 15, April 14, 1911.

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